THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

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Neglected Manures--Bones.

ANALYTICAL LABORATORY, YALE COLLEGE,
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MESSRS. EDITORS—Having now called attention to some of the leading differences in the constitution of manures, and to the substances which are most valuable in them, I shall proceed to mention particular instances in the various classes named.

The extent to which fertilizers of every description are wasted in this country, is exceedingly great; if the value of all that is thus lost in one year could in any way be accurately ascertained, even over a comparatively small district, the aggregate amount would be found quite astonishing. Many farmers do not save much more than half of their farm-yard manure, permitting all of the urine and the drainings to be washed away by rains; of those who do endeavor to preserve their yard manure in the best possible state, there are many who neglect means of fertilizing their soils that are far more powerful. We often see those who buy guano, poudrette, &c., at high prices, and yet pass by quite as valuable manures that they might obtain for little or nothing.

I propose to specify and describe some of these neglected manures, and to explain some of the properties which establish their value.

One of the most common of all, and one that till lately has been almost entirely thrown away among us, is found in bones. Though this manure is now gradually coming into use, in most districts its excellence is still almost unknown, and incalculably the greater part of our bones are either thrown away, used for manufacturing purposes, or exported to enrich the soil of Great Britain.

In urging the importance of bones as a manure, I shall first give some details relative to their component parts. The bones of animals, birds, and fishes, when dry, do not differ greatly in their composition, although their appearance is so different. Bones of animals, in their fresh state, contain from five to thirty per cent. of water, mingled with a little fat; those of fishes contain from 70 to 80 per cent. of water. When dry, the proportion of earthy matter in each is about the same. This dry bone is not, however, by any means all earthy matter; about one-third of it is an organic substance called cartilage or gelatine. It is soluble in water, and may be for the greater part, extracted by boiling, forming common glue; this useful cement, the cartilage of bones, is an extremely nutritious and concentrated food. When obtained from clean bones, the solution evaporated, and seasoned so as to be palatable, little cakes may be made which will keep unchanged for a long time; small portions of these will retain the strength of the body in a degree corresponding to that derived from a full meal of ordinary food. When a strong heat is applied, this organic matter disappears, and the bone is left perfectly white, but not reduced in size. If a little muriatic acid be mingled with water, and a bone placed in it for a few days, the earthy matter will be dissolved out, the bone being again left of full size, but now perfectly flexible, so that it may be bent like a piece of rope. In this way, we can prove that the cartilage and the earthy part are each distributed through the whole bone. If it were all earthy matter, then it would be brittle and liable to snap by a sudden spring or blow; the cartilage, however, imparts so much elasticity that, unless in cases of great violence, bones ordinarily resist uninjured the shocks to which they are exposed.

This cartilage owes its remarkably nutritious properties to the large quantity of nitrogen which it contains. The 60 or 70 per cent. of earthy or mineral matter which remains after the separation of the cartilage, is composed chiefly of phosphoric acid, in combination with lime, forming what is called, as mentioned in my last letter, phosphate of lime. Beside this, there are small quantities of carbonate of lime, (lime and carbonic acid,) carbonate of magnesia, &c. Thus then, in 100 pounds of dry bones, there are about 35 pounds of cartilage, 50 to 55 of phosphate of lime, and 10 to 15 of carbonates of lime and magnesia.

When it is considered that the cartilage is rich in nitrogen, and the phosphate of lime in phosphoric acid, we see at once from what has been said as to the value of manures in a preceding letter, that bones must be remarkably fertilizing; in them we have the very requisites that were mentioned as the principal ones in all very powerful manures.

Some writers have attempted to show that the beneficial action of bones was due to the cartilage; others that it should be ascribed to the phosphates alone. I think that both are wrong, for the reason that each part contains substances in which most soils are deficient, and hence both are likely, in a majority of cases, to prove advantageous additions. One would suppose that as the cartilage is soluble, it would soon disappear, but this is not by any means the fact, for it seems to dissolve out very slowly under the earth's surface. Berzelius tells of a soil in Sweden which had long been celebrated for its capacity of bearing grain. There seemed to be no reason why it should be so superior to other soils, but a close examination with a glass, discovered fine fragments of bone, and it was then remembered that this had been, according to tradition, an ancient battle field; the bones of the fallen warriors still continued to enrich its soil. When a quantity of these fragments of bones were collected and boiled, a thin jelly was obtained by dissolving out small portions of cartilage which thus remained in part, even after the lapse of so long a time. Both portions

then, probably, continue to furnish food for the plant, until the bone finally crumbles quite away. The *first effect* is doubtless owing in a great degree to the cartilage, as that is most soluble.

Having thus settled the question as to the value of bones, we proceed to consider the various modes of applying them to the soil, with reference to their effect upon crops. The old plan was to plow in the bones whole; applied in this way, their action was not so immediate as lasting: the whole bone decomposes very slowly in the soil, and may be taken up after lying buried many years, scarcely changed as to its external form; it will be found, however, if it has lain near the surface, that the color has altered, that it has become light, honey-combed and brittle. A chemical examination will show that it has been slowly dissolving, and yielding its various constituents to supply the wants of plants. The roots of any plant which can reach such a bone, will twine around it, insert themselves into its cavities, and show in every way, how eager they are for the food which it affords them. The decomposition of whole bones being so gradual, and it being difficult to distribute them equally so that all of the plants might feel their influence, it was necessary to apply large quantities; from 70 to 100 bushels accordingly, were not an uncommon dressing for an acre.

At this rate, all of the bones available to the farmer, would not go far toward manuring his land, and it became desirable to devise some more economical method of application. This was found in crushed or ground bones. They are now in Great Britain, used in various stages of fineness; inch, half inch and dust, are three of the more common descriptions. Bone dust is the most active and the most speedy in its effects, so that a smaller quantity than that of the other kinds will produce an equal benefit to the crop. Being so fine, it decomposes more readily, and is therefore not as lasting. There is, nevertheless, better economy in its use, for it lasts a long time, even in a minute state of division; 8 or 10 bushels doing more good than 70 or 80 bushels of whole bones. Being powdered, the dust can be sown evenly over the surface, either by hand or machine, or can be deposited in drills. A small quantity thus put on at short intervals, keeps the land constantly well supplied with as little waste as possible; it is also, by this system, always retained near the surface, and within the reach of roots.

If the dust or crushed bones be heaped up ten days or a fortnight before required for use, and covered with earth, a heating and fermentation takes place which prepares for a more speedy decomposition, and consequent fertilizing action in the soil. It is also found a very good practice to mix with fermenting yard manure when it is intended to apply bone dust broadcast and plow it in.

From the mention which has been made of nitrogen and of phosphates in the *grain* of our crops, it might be inferred that this manure is especially adapted to the increase of that part, and experience in England has amply proved this to be the fact.

There are now several mills where bones are ground in the neighborhood of Meriden and Middletown, Ct. I have been informed during the past season, that ten bushels of bone dust from these mills, per acre, brings up much of the worn-out land in that vicinity at once, enabling it to bear as much Indian corn as when it was first broken up from the virgin forest. I have no reason to doubt this report, as it only agrees with the results obtained in numberless cases abroad.

There is yet another and most important method of applying bones, a notice of which must be deferred till my next communication. JOHN P. NORTON.

Of Plows and Plowing.

EDITORS OF THE CULTIVATOR—In the course of travel last summer in Massachusetts, I met with Mr. NOURSE, of the firm of Ruggles, Nourse & Mason, plow-makers of world-wide celebrity. We had a conversation about some improvements in the construction of the Plow, which are important in order to arriving at some results in plowing, as yet unattained, in the most desirable manner. We had not time then to talk up the matter so fully as to settle upon the exact form of castings for our purpose, and agreed upon another meeting in the winter, at a time when both of us might be more at leisure. I accordingly called upon Mr. Nourse, a short time since, at his warehouse in Boston, and accompanied him from thence to the Plow Manufactory at Worcester, where, with the other gentlemen of the firm, our subject was fully discussed.

It was agreed, on all hands, that while the green-sward plow has been carried to so high perfection of form as to do its appropriate work with great precision, neatness, and ease of draught, a plow suitable for turning stubble or fallow-cropped land, has been very much overlooked. It has never yet occurred to me by what principles of construction the two implements can be combined in one; for sod and stubble plowing are two distinct operations, involving quite different mechanical principles.

The green-sward plow should enter the soil by a long and very gradually rising point, the wing or cutting share of which, should slowly widen, attaining its full breadth far in the rear; the mould board should lift the furrow-slice by an easy progression, quietly and smoothly laying it over in an inverted position; and the course of the plow through the ground should be so generally easy, natural and steady, as to require but little help from the plowman, and the least practicable draught upon the team.

The stubble plow should enter the ground more abruptly; and, by a generally shorter construction, and greater width of heel in proportion to length of mould-board, lift, and forcibly throw its loose furrow-slice over into the proper place, leaving a clear channel behind it. Ease of draught cannot be studied so closely here as in the green-sward plow, except at the expense of good work. The beam, and the standard of the castings, where the two connect, should be several inches higher than in any plow I have ever seen, in order to prevent clogging. I have followed the plow many a day in rank stubble, and in turning under partly fermented manure in moist land, with a crotched stick in my left hand, poking away with all my might, to keep the stubble or litter from gathering into a heap under the beam, and thus producing a baulk, or a shallow imperfect furrow. Last spring I determined to attempt an improvement in this particular. I got the standard of my stubble plow lengthened, and had a very high arching beam put in, which gave a space of *eighteen* inches between the sole of the castings and the bottom of the beam,—and that cured it of clogging. The mould-board of my plow, however, is not of proper form to turn stubble as it should be done.

If a stubble-plow of the right construction were put into sod-ground, it would lift the turf quite abruptly, and lay it over in a broken, uneven manner. So when a green-sward plow, of appproved form, is put into loose, cultivated ground, we find that it lifts the soil to its highest or perpendicular point.

and then, for want of sufficient force in the mould-board, or rather from being too narrow at the heel, about as much of the earth rolls the wrong way as the right; and the general character of the work is bad. These ideas seem to me to be correct; and if so, it is evident that the best kind of work can not be done both in stubble and green-sward, by one and the same plow.

For one, I feel the want of a sward plow that will turn a furrow a foot deep, and as narrow as is possibly compatible with that depth, and which shall not be liable to choke under the beam. When I commenced farming, my lands would not bear plowing over five or six inches deep. I have been gradually introducing the poor stratum below to the genial influences of the atmosphere and of compost manure, until I have made a soil of nine or ten inches, of uniform quality. But I have got about as low as I can go with decent execution, until a different plow from any I now know of, is made. My mowing-lands bear a pretty heavy aftermath; and when the plow is guaged to a depth exceeding nine or ten inches, the clear space left between the beam and the surface of the ground is so narrow, that I am constantly vexed with the wadding up of the long tangling grass upon the cutter of the plow, and thus prevented from maintaining the desired depth of furrow.

Messrs. Ruggles, Nourse & Mason are now getting up patterns for a stubble and a breaking-up plow, which I think will meet my ideas exactly. When spring opens, I shall test them by a trial in the ground; and if I find them to be the thing wanted, I shall then send drawings of them for *The Cultivator*, along with remarks more fully in detail upon their construction, and the desirable results they are calculated to produce.

While walking through the establishments of these gentlemen at Boston and Worcester, observing the extent of their manufactures, and the many indications of their ingenuity and enterprise in the same, I was forcibly impressed by a reflection upon the important influences their labors are imparting to our agriculture. They may truly be said to be benefactors of the farmers. Their Warehouse and Seed-store in Boston, contains an agricultural variety, almost as exciting to the visitor as the collections of a Museum. Every kind of field and garden seeds, of implements and machines, may here be found, of the best quality, and in quantities to suit the purchaser. Their Manufactory at Worcester, is a little world of itself; and he who would like to see that which is to be done well done,—who prefers farming-tools possessing beauty, strength and durability, to those of a clumsy, heavy, and make-do construction,—may here find his tastes gratified, even to the turning of a screw.

Surveying with delight, the great variety and utility of the implements of husbandry around me, I said to myself—'here is striking evidence of the value of the efforts of science and cultivated mind on behalf of Agriculture.' If we wish now to perform any kind of labor upon the farm, we find a tool ready for our use, by which we can do the work easier, better and cheaper, than we could ten years ago. The effect upon our farmers is great. It sets them upon thinking, and awakens pride and a determination to farm it better every way. I have often been pleased in noticing the effects commonly following the first introduction upon a farm, of an improved modern plow, for instance. The owner takes it to his meadow, and to his surprise and delight finds that, with two or three cattle, and but little labor on his part, the sod can be laid over smoothly, and with mathematical precision, where formerly he had to hitch on twice as much team to draw his old plow, and put himself into all sorts of shapes to keep it right side up in the ground, or perhaps to keep it in the field. As he surveys his now smooth and regular furrows, and contrasts them with his usual course of husbandry, he begins to think about mending his ways generally; and I have noticed that the introduction of the new plow has often proved the starting-post in a better general system of farming. The observing man does not look for enlightened and correct tillage where the tools in use are rude and ill-shaped, nor does he often find it careless and improvident where those of improved construction have been introduced.

Messrs. Ruggles, Nourse & Mason make their plows from patterns and by machinery of their own invention, upon which they have expended a great deal of time, thought and money, to bring them to their present state of perfection. Their Eagle Plows now embrace a great variety of sizes, forms and fixtures, fitted to all kinds of soil and modes of cultivation. The wood parts are made of the Worcester county white oak, of second growth. The forest oak is preferred to that growing in open land, because the grain is not so coarse, and the timber, when dry, is tougher. The beams and handles are sawed out by patterns nearly to shape, by the farmers around, and delivered at the factory in a partly seasoned state They are then stacked up in a lumber-room to season a year longer, and are occasionally overhauled to prevent the powder-post. The handles, when sufficiently seasoned, are first steamed, and then they can be bent to any desired shape. Various machines afterwards dress, tenon, bore and fit them for use. The beams are first put into a machine which planes them to uniform thickness on the sides, and takes them out of wind; another machine brings the tops and bottoms to any curve that may be wanted, a pattern being laid on for a guide which is adapted to the purpose; others tenon and mortice the ends for the reception of the handles, corner and check them, and bore the various holes for the clevis, standard bolt, &c. A thousand beams and handles, of any one sized plow, having gone through these various operations, will all be alike in shape, and any or all of them will fit their proper place without further trouble. When a quantity of plows of a given pattern are to be fitted up for market, the castings are placed upon a platform, to which is affixed the proper guages and guides to adjust the various parts of the plow to each other, so as to give the implement its proper land, pitch of beam, and pitch and height of handles; and the uniformity with which this may be done is so perfect, that any number of plows, of one size, will all be alike in these particulars.

A furnace is attached to the manufactory, where all the various castings are made. Some 5,000 lbs. of iron are daily worked up. The best quality of metal known in the markets is used. Numerous experiments have been tried in order to arrive at that admixture of the different kinds of iron which shall combine the greatest strength, toughness, hardness and durability of castings, No other metal has been found to be so strong and hard as the best American. Great pains is taken in the construction of flasks, in moulding and casting generally, in order to produce a close correspondence to patterns, and a perfect fit when the various parts of the plow are to be put together. The plow-points, and the entire length of sole on the land-side castings, are chill-hardened, as it is termed, so that the whole bottom-surface of the plow, exposed to wear, is

thereby made more durable. The castings are taken from the furnace and placed in a vat, containing a solution of vitriol in water, which takes off the sand or scale from the iron. They are then put upon grind-stones revolving rapidly by water-power, brought to a polished surface, and afterwards coated with a blue varnish to prevent rust. Thus a new plow, when put to work, needs no scouring, and will keep bright in the most adhesive soil.

In addition to the manufacture of plows, these gentlemen make a great variety of other agricultural implements, and all by machinery adapted to the purpose. When any new tool or machine, or any new form of an old one, is to be made, they set immediately about inventing machines by which it can be manufactured with accuracy, and which shall do the work of many men.

I may conclude to give, in another communication, drawings and descriptions of some of the more important articles of manufacture that I noticed, and which struck me as being very useful and perfect. F. HOLBROOK. *Brattleboro', Vt., January* 20, 1850.

Studies for the Farmer.

EDS. CULTIVATOR—Some weeks since, I received from my friend, F. HOLBROOK, Esq., of Brattleboro', Vt., in pamphlet form, a Report of the Vermont Legislature, on the formation of a "National Board of Agriculture," a copy of which was published in the December number of *The Cultivator*. Of the importance and merits of the Report, I need not here speak; it commends itself to the favorable consideration of every intelligent, thinking farmer in the country, who may be so fortunate as to obtain a copy of it.

As a text for a few remarks, I make use of the following short extract: "Too many of our intelligent, enterprising young men—observing the sad condition of the soil, and trained to false impressions—suppose that the agricultural profession, instead of being an open field for the efforts of science to improve, is but an arena fit only to be occupied by the illiterate and unenterprising, under the guidance of blind tradition. They accordingly press in masses into other callings, filling them to overflowing, and leaving the 'Art of Arts' to its fate."

The above extract, is a truthful picture of the past, but we have many good reasons for hoping a brighter day is dawning; intelligent and educated men of all the varied professions and pursuits of our country, are turning their attention to the importance of this "Art of Arts," and they are in various ways, lending their aid and influence to its improvement. Their precepts and examples are having a visible and salutary effect upon the great mass of practical farmers throughout nearly all sections of the older and long-settled parts of our country. And, added to this, the unwearied efforts of many of the master minds of the age, who from their laboratories, are scattering broadcast all over the civilised world, the great truth that agriculture is a *science*, as well as an *art*, and that by the application of correct scientific principles to the practical labors of the husbandman, his crops may be readily doubled, or tripled, upon the same area of soil, and that the profits of his labors will be increased in nearly the same ratio, while at the same time the manual and brute labor will be greatly lessened. These statements are not problems, yet to be solved, for facts innumerable, both in England and in this country, have fully settled the question. But the above are pecuniary considerations, and they are not trifling ones, neither, in a community where "dollars and cents" possess such a potency, such a charm. But there is another view connected with this subject, in which *dollars and cents* come not in competition. I mean the right culture of the mind of the farmer, for there have been, and are now, "false impressions" in reference to this. The late Mr. Colman, in some of his writings, has the following truthful remarks: "The time has been, when it was thought that any dunce could make a farmer," But he said it "required quite as much intellect and study to make a good farmer, as it did to make a good Lawyer, Doctor or Minister."

To know how to skilfully wield the axe, the scythe, and the other implements of the farm, must be the result of long practice in early years, and it forms an important part of the young farmer's education. To cultivate and improve the mind, (that attribute which so pre-eminently qualifies man to reason and investigate) forms another important part of the farmer's education, and this, also, requires practice, united to study, and habits of close observation, for in the bosom of man his Maker has implanted instinctive longings to know and comprehend the "how and the wherefore" of what he sees in the world around him, by which, and for which he lives. To gratify these "instinctive longings," it seems to me there is no other pursuit in which there is a wider range for useful study, and a broader scope for the application of a larger number of the sciences for practical purposes, than in that of the farmer.

The investigation of that beautiful and allwise arrangement of *matter*, that has so intimately and mysteriously linked together the dead earth, the living plant, and the moving animal, is a source of ever-living study and instruction. The study of the earth or soil, is of great practical use to the farmer, and necessarily brings him in contact with geology, one of the most interesting and instructive of the modern sciences. All soils were primarily the result of geological agencies; the fertility of one soil and the barrenness of another, depends very much upon its geological formation, and the relative proportions in which the mineral constituents of the soil exist in it. But as there is no treatise on geology wholly or particularly adapted to agriculture, it must be studied as a science. The study of which will amply compensate any one for all labor bestowed upon it, for it carries the student in point of history back long series of ages before the appearance of man upon earth, and unfolds to the mind some of those mighty convulsions and throes of nature, that have fractured and rent asunder the solid strata, and uplifted them at every angle of elevation, and thus brought to the "light of day," the fossil remains of myriads of once living and organised creatures of the older world, great or small, of every shape, form and color. The study of these "medals of creation" fills the mind with wonder and amazement, both in respect to the creative powers of the Deity, and the immense antiquity of this our globe. The host of extinct races of creatures and plants that once flourished upon this globe, "though dead yet speak," and they speak, too, of a length of time, so vast in the aggregate, so indefinite, that in contrast with them, the most ancient monuments of Greece or Rome, or the hieroglyphics of Egypt, are but as things of yesterday. Design is evidently stamped upon all the works of the Creator, and we have every reason to believe that all those multitudinous changes to which this globe has been subjected in by-gone ages, were but unbroken links in the great chain of events, as connected with the present ra-

ces of beings, and the state of things now existing upon this planet.

Every one is aware of the different capacities of soils for the production of luxuriant crops. Yet, but a small portion of the weight of a plant is drawn directly from the soil; only that portion that remains in the form of ash after the plant has been burned, was derived directly from that source. This is termed the inorganic portion, and seldom amounts to 10 pr ct., and in some species of plants it is less than 1 per cent. The 99 per cent. that is driven off by the process of burning, is called the organic part, and was derived from the gaseous constituents of the atmosphere and water.

The study of the atmosphere in reference to the purposes of animal and vegetable economy, is a source of the highest intellectual enjoyment, and it most beautifully illustrates the wisdom and beneficence of its great Author. "The atmosphere is a mixture of oxygen, nitrogen, carbonic acid, water-vapor, and ammonia; and every living thing on the dry land, animal and vegetable, is bathed in it, lives on it, and by it; and such is its adaptation to the wants of animals and plants, that neither class of *living* beings vitiate, or impair its suitableness for the other; but the very reverse of this, for each is the appointed means of preserving it in a salubrious state for the opposite class; the plant constantly adding to it food for the animal, the animal constantly supplying food for the plant."

The above seems a wise law of reciprocity. Although there is a vast difference in the specific gravity of the several gases composing the atmosphere, they are kept in a complete state of mixture by the law of "gaseous diffusion," a law overpowering the almost universal law of gravitation.

But an acquaintance with the qualities of the constituents of the atmosphere, implies some knowledge of chemistry, and for the most economical management of a farm, it seems necessary that the farmer should possess a competent knowledge of agricultural chemistry, for the whole process, from the first movement of the germ of the seed he commits to the earth, up to the full maturity of the crop it produces, is one continuous series of chemical changes and effects. Yes, farther than this; 'till his hay, grain, roots, &c., are converted into beef, pork, mutton, wool, &c. Said Mr. Quincy,—"It is in the power of every man to reserve some portion of his time for these pursuits; and he will find that every addition to his stock of knowledge will make his walks pleasanter, the flowers the sweeter, and every thing more full of interest and meaning." The farmer too, "should know something of the physiology of the vegetable world; and every blade of grass, and ear of corn will speak to him of the benevolence and skill of the Great Contriver." He should, too, possess some knowledge of mineralogy, and then every stone would partially disclose to him their great design, and every grain of sand bears unmistakeable marks of the fingers of a most exquisite artist.

There are many more important branches of science connected with the well being of the cultivator of the soil, but the length of this reminds me of drawing to a close; but I trust enough has been written to prove that the life of the farmer, is not *necessarily*, as some would have us believe, a life of incessant toil, and grovelling drudgery, wholly of the "earth, earthy," for "the farmer is that favored being who is permitted as it were, to stand in the laboratory of the Infinite One," and from his fortunate position, he has the opportunity, if he will improve it, of deriving the highest moral, mental, and religious enjoyment. LEVI BARTLETT.

Sheep--Varieties of the Merino.

We have several times been requested to give "the specific marks" which distinguish the Saxon from the Merino sheep.

The impracticability of laying down strict rules in reference to such distinction, will be in some degree obvious, when it is understood that what is called Saxon is but a variety of the Merino, as will appear from a brief notice of their history.

The Merino is undoubtedly a race of great antiquity, and from the earliest times has possessed qualities quite different from any other sheep. Under different circumstances, the characteristics of the race have been somewhat modified, and varieties under different names have sprung up; but in Europe, the term Merino is applied to all the branches of the original stock.

The Merino race has, in modern times, been chiefly disseminated from Spain; though that country, is not, probably, its original home. We are informed of the introduction to that kingdom of sheep of similar characters; and the name *Mareno* signifies from beyond the sea.* Pliny, and other ancient Roman writers, describe various breeds of Spanish sheep, distinguished by different colors, as black, red, and tawny. Those bearing a reddish fleece, found in Bætica, Grenada and Andalusia, were considered of the finest quality. They were probably taken to Spain from Italy, where they had been long known and highly esteemed under the name of the Tarentine breed. Their introduction into Italy has been attributed to the Greeks, by whom the breed had been obtained from Syria and the coast of the Black Sea.

History informs us that Columella, a colonist from Italy, and uncle to a writer on agriculture of that name, introduced more of the Tarentine breed into Spain, during the first century of the Christian era It is certain, however, that Spain possessed sheep which were celebrated for the fineness of their wool previous to this period. But in reference to the extent of the improvements effected by Columella, it has been observed, that "as Spain was at that time highly civilized, and as agriculture was the favorite pursuit of the greater part of the colonists that spread over the vast territory which then owned the Roman power, it is highly probable that the experiments of Columella laid the foundation for a general improvement in the Spanish sheep—an improvement which was not lost, nor even materially impaired, during the darker ages that succeeded."†

It may be remarked, in passing, that there have always been coarse-wooled as well as fine-wooled sheep in Spain—the former being principally called *Chunahs*. The Spanish government, at an early day became so convinced of the great value of the Merinos, that a special edict was passed, prohibiting their exportation without royal license. This prevented a general spread of the race till after the overthrow of the Spanish dynasty by the French, under Napoleon.

For several years, the most valuable Merinos in Spain were in possession of the Crown and its dependants. The principal flocks were the Escurial, Guadeloupe, Paular, Infantado, Negretti, Montarco, and Aguerre. These varied in quality, according to the skill and care which had been bestowed in breeding and management. The Escurial were deemed superior to all the others in fineness of wool.‡

* Hon. Wm. Jarvis. † Youatt.

‡ For particular descriptions of these varieties, see letter of Hon W. Jarvis, *Cultivator* for 1844, p. 127; Youatt's Treatise on Sheep, p. 156; and Livingston's *Essay on Sheep*, pp. 47, 48.

ORIGIN OF THE SAXON MERINOS.—The first introduction of Merino sheep into Saxony, was made in 1765. They were obtained by a grant from the King of Spain to the Elector of Saxony. "One hundred and nineteen ewes and one hundred and ten rams were selected principally from the Escurial flocks, then the King's private property, under the care and management of the monks belonging to the monastery of that name, and which were considered the finest sheep in the kingdom."* Spanish shepherds went with the sheep, and remained till the Saxon shepherds could be instructed in the details of management.

These sheep were bred with great care, under the direction of commissioners appointed by the Elector to superintend the management of his flock, and after the expiration of twelve years, or in 1777, another importation was made from Spain, consisting of one hundred and ten rams and ewes. According to Mr. Grove, these were selected from the best flocks of Leon, Escurial, Negretti, Montarco, &c., and were of very superior quality.

From these stocks, the pure Merino breed rapidly increased in Saxony, and was finally extended into the neighboring German states. Its progress was at first strongly opposed by the prejudices of the people; but by the perseverance of the Elector and other influential individuals it became perfectly naturalised, and after the lapse of several years, the fleece of the Saxon was brought to a degree of fineness excelling the best Spanish.

It is thus seen that the Saxon is identical in blood with the Spanish Merino—that the former were, in fact, derived from a selection of the finer specimens of the latter, and that the superior fineness of the wool of the Saxons is attributable to the system pursued in their breeding and management. And here the question arises—Could not such an improvement be made in this country as well as in Saxony? We answer, yes: there is no reason why the application of the same skill and care to the same materials, should not produce the same results in America as in Germany. There is nothing in our climate or soil which naturally tends to the deterioration of the fleece; and in the hands of some of our wool-growers, the finest stocks that have been introduced from Spain and Saxony, have maintained their standard for many generations. We have had the Escurial and other Spanish stocks, from which the finest Saxon sheep were derived; and where fineness of staple has been the object, their American descendants have possessed the quality, in a degree always proportionate to the skill to which they have been subjected.

It does not, therefore, necessarily follow, that because sheep produce wool that is finer than ordinary Merino, they are Saxons, or that any of their ancestors came from Saxony. We might refer, by way of illustration, to examples in our own country, such as the flock of the late W. R. Dickinson, of Steubenville, Ohio, and other flocks in Ohio, Virginia and Pennsylvania, which were derived from this.† The great fact to be kept in view is, that the properties of animals, (including wool,) are modified by the influences which are brought to bear on them—as food, climate, shelter, and especially the rules observed in the selection of stock for breeding. Thus the Merino sheep, in the course of several generations, may be made to produce either finer or coarser, longer or shorter wool, than the original stock. It is not uncommon to find among the descendants of imported Saxons of the finest kind, sheep whose wool is coarser than much which passes under the name of Merino. There is evidently a tendency in the variety to return to its primitive condition—a tendency which the breeder, if he possesses the requisite knowledge and judgment, may overcome.

The inquiry has been made, whether the shape or turn of the horns, affords any mark of distinction between the Saxon and Spanish sheep. We are not aware of any such distinction. The first Saxon sheep brought to this country, had generally wide spreading horns; many of those lately imported, have their horns curved close to their heads. It is well known that the turn of the horns in sheep and cattle, vary with the caprice or fancy of the breeder.

THE FRENCH OR RAMBOUILLET MERINOS.—The breeds of sheep originally belonging to France, varied in character with the face of the country, and the nature of the pasture; but until the introduction of the Merinos, they generally produced coarse wool. It might naturally have been expected that as the country was only separated from Spain by the Pyrenees mountains, the valuable Merinos would have supplanted the breeds above mentioned, at an early day; but such was not the case. In the beginning of the last century, however, the French statesman, Colbert, at his own expense, conveyed several Merinos across the mountains. Thirty years afterwards, a few more Merinos were introduced; but the prejudices of the people effectually prevented the spread of the breed; and nothing important was accomplished towards their establishment in the kingdom till 1786, when the French government took up the matter, and obtained in Spain 376 Merinos. They were selected, according to M. Gilbert, (as quoted by Livingston in his *Essay on Sheep*,) from a great number of Spanish flocks in different parts of the kingdom. Sixty of them died on the passage. The remainder were sent to Rambouillet, about forty miles from Paris, where the government had an agricultural establishment devoted to the improvement of domestic animals. Many of the sheep and lambs were destroyed by various diseases in the course of the first year.

Notwithstanding these disasters, the Rambouillet flock gradually increased. To facilitate the spread of the breed, a publication on the treatment of sheep, was drawn up by M. Gilbert, under the patronage of the government; a practical school for the instruction of shepherds was instituted, and two other depots for Merinos were established. But with all these efforts, the introduction of the Merinos was comparatively slow; for when, (as stated by Youatt,) a census of the sheep in the kingdom was taken, twenty-five years after the establishment of the Rambouillet flock, there were thirty millions of the native breeds, and only two hundred thousand pure Merinos. What has been their comparative increase since that period, we have no means of ascertaining; but as the French people enjoyed a long period of quiet and prosperity, and greatly increased their manufactures of every description, after the peace of 1815, it is reasonable to suppose that the Merinos are now extensively reared in the kingdom.

The principal alterations which the Merinos appear to have undergone in France, are increase in size, and in weight of fleece. What has been the average increase in these respects, we have no data to show. Some which have been imported to the United States, have weighed 200 lbs. each, and have

* H. D. Grove.

† For an account of the origin of Mr. Dickinson's flock, see *Cultivator* for 1848, pp. 10, 11. See also accounts of the origin of the flocks of John H. Ewing, Washington, Pa., Talbot Hammond, Brooke county, Va., and Jesse Edington, near Wellsburg, Va., in the *American Shepherd*, pp. 414, 419, 429.

produced fleeces, of one year's growth, weighing, in the dirt, from twelve to fourteen pounds. An English writer, describing the Rambouillet sheep, observes: "The Spaniards entertained an opinion that a looseness of skin under the throat and other parts, contributed to the increase of fleece. This system the French have so much enlarged on, that they have produced in this flock individuals with dewlaps almost down to the knees, and folds of skin on the neck, like frills, nearly covering the head."

It has been mentioned above that the French Merinos were originally selected from many flocks in different parts of Spain; and hence, according to Gilbert, "they were distinguished by very striking local differences, which formed a medley disagreeable to the eye, but immaterial as it affected their quality." It is probable that the differences which at first existed in the flock, have operated to prevent an assimilation to a uniform standard in shape and size of carcass and quality of wool.

Relative Profits of different Varieties of Sheep.—It is to be regretted that with all the controversy and strife between the advocates of different varieties, little or no light is brought out in reference to the main points which affect their relative profits. It is true that different varieties are adapted to different circumstances; and between two localities, for instance, differing widely in soil, herbage and climate, it may not be difficult to say which of two breeds is best adapted to each. Nevertheless, there are situations in which the varieties kept in this country chiefly for the production of wool—Spanish, Saxon, French Merino, &c.—may be deemed to meet on an equality. Such situations are farms which are well provided with shelter, and where summer and winter feed is abundant and wholesome.

Now as regards the *production of wool*, what variety would yield the greatest profit under these circumstances? In answering this question, it is not sufficient to refer to the weight of the fleece, to the price it would bring in market, or to the aggregate amount in money which each sheep annually affords. Neither of these can settle the point. Nor can it be fully determined by a comparison of the net proceeds afforded by the wool of different kinds, in proportion to the weight of carcass—though it is admitted that this would be an approximation towards the desired result. But who has even made a fair and reliable trial of this kind? The true test, however, is comprehended in the question—What variety will yield the greatest income in proportion to the land occupied, and the labor expended in management? It is in reference to the point here involved, that we want light. Who has ever taken two different parcels of land, of equal quantity and quality, appropriated one part to one variety of sheep, and the other part to another—carefully charging each with their respective expenses, and crediting the income?

It seems to us important that measures should be taken to bring out information on this subject which can be depended on; and we would suggest that it is a proper question to be decided by agricultural societies. In their hands, the experiments might be carried on free from the bias which belongs more or less to individual rivalry. Let a committee of judicious and disinterested men be appointed, under whose superintendance and direction the trials shall be conducted; and, that the point aimed at may be fully ascertained, let the trials be continued through a series of five years—the results from year to year being made public under the sanction of the committee.

The Question Settled.

Eds. Cultivator—I am rejoiced to see in the October number of *The Cultivator*, that the long contested question in relation to the transmutation of wheat into chess, in the discussion of which so much feeling has been displayed, and such vast quantities of ink shed, has been finally settled, at least to the entire satisfaction of "A Gleaner of Agricultural Knowledge."

He says the question is settled, and most conclusively so in his mind, by evidence which cannot be contested, set aside, or explained away. Surely, the nineteenth century is destined to bear the palm from all the centuries that have preceded it, in grand and useful discoveries. The application of steam to navigation, the magnetic telegraph, and the transmutation of wheat into chess!—all discoveries of the nineteenth century, which is not half gone yet!

"A Gleaner of Agricultural Knowledge," should get the better of his modesty so far as to permit the world to know to whom they are indebted for such a valuable discovery, and for the settlement of so vexed a question;—one upon which the brains of so many have been suffered to go wool-gathering in days gone by.

The remarks of "A Gleaner" were of such a positive, sledge-hammer-like character, and came down so like "a thousand of brick," that I was forced to give in my adhesion to them; and so, before I had got through with his communication, I had come to the conclusion that the question was certainly settled, firm as the rock of Gibraltar; and had made up my mind henceforth to be a transmutationist—one of the straightest of the sect. But, lo! no sooner was the question settled, than it was immediately again unsettled by your criticism, appended to the communication of "A Gleaner." It was only for a moment, however, that I felt any misgivings in the new faith which I had so recently adopted, as the conclusion of your remarks again re-assured me of its truth.

Now in introducing the supposed case of the conversion of men into monkeys, I suppose you thought you was giving transmutation a tremendous thrust, whereas it has had the effect of more thoroughly confirming me in the faith, from the fact of its bringing to my mind an analogus (?) process, now going on in our midst, the degeneracy of our African population, and the process of transmutation of which they are the subjects, and through the effects of which they are rapidly being converted into whites!

Now if negroes can degenerate, as it is proved by ocular demonstration they do, and turn to white folks, why may not men be as easily 'converted' into monkeys, or wheat into chess?

Our lots have truly fallen upon evil times. Not only do our blacks turn white, and our wheat to chess, but even our timothy turns to chess, and our red clover to white. A few weeks since, I heard a farmer in this county assert, most positively, that timothy would turn to chess; and as evidence of the fact, cited a case within his own knowledge, by which he proved his position as conclusively as "A Gleaner" in *The Cultivator*, does his.

I have frequently heard the idea advanced that red clover, after a few years, would degenerate and turn to white clover. As to the way in which white clover was introduced in this country, there are a variety of opinions. Some contending that it is red clover degenerated, others that it is a sponta-

neous production, and I heard one man declare that it was brough in by a Yankee pedlar, and sold for red clover seed—his father having purchased some of the seed which proved to be white. It doubtless proved a profitable speculation to the vender, such an one as Yankees are apt to engage in, as white clover seed is only worth from four to eight times as much as red!

With these few prefatory remarks by way of introduction, as the writers say, I shall now proceed to relate my experience in the transmutation of wheat into chess.

In the fall of 1846, my father, with whom I was then living, sowed about ten acres in wheat. The ground had not been in wheat for some eight years before. The seed was so clear of chess that it was extremely difficult to find a grain. When harvest time came round, and the wheat was harvested and got out, the yield was only about six bushels to the acre, owing to its having been so badly frozen out in the winter. There were spots of a yard square or more perfectly bare of wheat. But where there was any thing, it was either wheat, or weeds of some kind, or timothy, which had been sown on the ground in the winter. There was scarcely a bunch of chess to be found in the whole field.

While the farmers generally were lamenting that their wheat had frozen out and turned to chess, or cheat, as it is called here, ours had frozen out as bad as any, but it had not turned to cheat. This was a poser to the transmutationists, whose attention was directed to the subject.

Divers were the reasons advanced and suppositions ventured in accounting for so unheard-of a phenomena as that of wheat freezing out and not turning to chess! Failing to convince the anties of the soundness of their doctrine, they would usually wind up by citing some half dozen cases, where clean seed had been sown upon clean ground, and a pretty fair crop of chess gathered in place of wheat.

In the fall of 1847, we sowed about twelve acres out of the wheat grown that year, a part on new ground, and the balance on old ground, that had not been in wheat for eight or ten years. We raised a good crop of wheat and no chess, or not more than could be chargeable to the few seeds that had been sown. In the fall of 1848, we sowed, between us, about 45 acres, out of the wheat grown that year, still as clear of chess as when we began with it in '46. Mine, some 15 acres, was very badly frozen out, so much so that had it escaped the rust, it would not have yielded more than five or six bushels to the acre; as it was, it was not worth cutting. A portion of my father's was also badly frozen out. Yet, notwithstanding the havoc made by the frost, the transmutationist's principal agent in the conversion of wheat into chess, I have no idea that in the whole 45 acres there could have been gathered a quart of clean chess.

Now these are facts, and facts, like certain long-eared animals, are said to be "stubborn things."

As to the question whether or not wheat may, can, will, or does turn to chess, I shall not pretend to decide, either *pro* or *con;* but would merely remark that in the course of my observation, I have found that those who are firm believers in the doctrine of transmutation, and consider it unnecessary to be very particular about cleaning their seed wheat, have their faith confirmed very often by their wheat turning to chess; while those who take the common sense view of the matter, that chess, like every other vegetable production, comes from the seed and no where else, and act accordingly, sowing clean seed on clean ground, seldom, if ever, have to lament over their wheat turning to chess.*

Farmers generally have very vague and confused notions of the nature of chess. In the first place it is one of the most *accomodating* plants that grow. You may sow a gallon of the seed, in conjunction with a bushel and a-half of wheat, and if the wheat comes up and meets with no casualty, it will cover the ground, and you will scarcely see a head of the chess at harvest, over 6 inches in height. It is frequently seen in such cases not more than two or three inches high, with one or two fully developed grains on the top. But let the wheat be destroyed by freezing out, or grazing, and the chess, ready to fill its place, branches out, grows luxuriantly, and produces a glorious crop. Secondly, it is one of the hardiest plants in the world. The seed is in a manner indigestible, and is generally as capable of germination after passing through the stomach of animals, as before; and it may lie in the ground for years, under unfavorable circumstances, and when brought to the surface it will germinate and grow. Freezing seems to have no effect upon the plant, and grazing but very little. Thirdly and lastly, it is one of the most prolific of plants. My curiosity prompted me one day last summer, to count the seed on a common sized bunch of chess. Their number was 2,607. Supposing each grain capable of producing this number, and I have no doubt that it can, with any thing like a fair chance, such as having the wheat frozen out or destroyed in any way, and the increase of a single grain in three years, will amount to the enormous quantity of 17,718,342,543 grains. JAS. R. HAMMOND. *Shandy Hall, Cooper Co., Mo., Nov.* 22, 1849.

Rural Economy.

Profits of Dairying.

EDS. CULTIVATOR—As thy columns are filled up with modes and results of farming, I take the liberty to send a statement for publication, of the manner I have conducted my dairy, and the proceeds of the same for the year 1849.

My dairy consists of 30 cows, most of which are of common breed, though few are part Devonshire. They were fed as follows: on hay and upland pasture, with all the whey, except enough to rear three calves, and partially fatten four hogs. In addition, I fed during the season, sixty bushels of corn and oat meal, three-quarters of an acre of green corn, which, owing to the drouth, was not likely to come to maturity, and twelve loads of pumpkins, boiled and fed with whey, as was the meal.

The following is my mode of making cheese: We strain the milk at night into a tin pan, which is surrounded by a wooden one, with a space of one and a-half inch which is filled with water. After the morning's milk is put in, the whole is warmed to 80° by steam, operating upon the water. After the rennet is well stirred in, let it stand forty minutes, then cut it coarsely; let it stand fifteen minutes, then cut it finer, and raise the heat to 90°. Work it occasionally with the hand for thirty minutes; then

* These remarks should be remembered, as they show that faith, is in this case, a matter of practical importance. We have often met with farmers who held the idea that chess, of itself, did not grow—it only came from wheat! Consequently, it was of "no use to be particular" about sowing the seed. We know many persons, however who do not believe in transmutation, and these farmers, (and this is a fact well worthy the consideration of the believers in transmutation,) grow no chess on their farms, and never have occasion to complain of the change of their wheat to chess.—EDS.

draw off one-third of the whey, and work the curd fine and scald to 100°, if for home market—and if for foreign, 110°. Draw off the whey, and let the curd cool; put one pound of Ashton salt to forty pounds of the curd, and press very hard.

I commenced operations 1st of 4mo., and up to 12mo. 29th day, I find the result as follows:

18,205 lbs. cheese, sold in New-York for 7 cts. per lb., ...	$1274 35
550 lbs of Butter,.....	80 75
	$1355 10
Commission, boxes, and transportation, ...	$127 43
Nett proceeds, ...	$1227 67

Which gives to each cow 606 5-6ths lbs. of cheese and 18¼ lbs. of butter, worth $40.92, exclusive of calf, &c.

The age of the cheese when sent to market, has averaged from 30 to 60 days. OTIS DILLINGHAM. *Granville, Wash. Co., N. Y., 1st Mo.*, 25, 1850.

Large vs. Small Cheeses.

The *Ashtabula Telegraph*, speaking of the great decline in the price of cheese in the northern part of Ohio, the last season, attributes it to the large size of the cheeses.

"It is stated by one of our most intelligent and cautious merchants, that his experience of New-York prices of cheese, acquired during his fall visit to make purchases, settled in his mind, conclusively, the form and weight of cheese intended for export or for city use. He found on inquiry at the highest sources, that while five and a-half cents was the top price for our large sized cheese, the small sizes, say from ten to twenty pounds, were quick of sale at nine and nine and a-half cents. This, he declared, was a fact worth knowing by a country merchant in the habit of buying cheese, and it is a fact worth knowing by those who make cheese. Large cheeses, however skillfully and carefully made and kept, are bad travellers. The principle of decomposition is inherent in every cheese, and nothing but dryness can arrest it; but in large dairies this degree of dryness is difficult of attainment,—is seldom attained. What is called *heaving* in cheese is simply fermentation, and this is the first step to decomposition, which is inevitable, after the *heaving* has once occurred. The great losses heretofore sustained by foreign merchants—purchasers of large cheese, have made them shy of the article, and their loss of character has led to their fall in value."

Dunlop Cheese.

The following method of making this celebrated cheese, is given by Mr. ROBERT GRAY, a practical Scotch Farmer, now residing in New Brunswick. It is taken from the report of the Directors of the St. John Agricultural Society:

When more than the produce of one milking is used, the old milk must be heated to the same temperature as that newly drawn from the cows, or a little above it. This is best done by putting the milk, after taking off the cream, into a tin pan, and that again into boiling water. When the milk is properly heated, it is (together with the cream previously drawn off,) and the new milk, put into a tub and well stirred together, and the steep applied. When the milk has coagulated, which will be in about 20 minutes, the whole should be stirred up and thoroughly broken by the hand. In ten minutes afterwards the whey should be taken off, and the curd pressed against the bottom of the tub, till it is firm enough to be lifted into a drainer, or vessel with a porous bottom, when it is cut with a knife once in every ten minutes for an hour. It is then put into a cloth, and a pressure applied to expel the whey more thoroughly. When this is done and the curd gets dry and firm, it is put into a tub and carefully minced with the curd knife, and salt and a little nitre applied. The curd, with a cloth round it, is then put into a chesset, set before the fire for three hours, and turned from time to time to preserve a uniform heat. It is then put in the press and a light pressure applied. At the end of an hour the cheese is turned upside down in the chesset, and a cloth drawn from boiling water applied. At the end of another hour, the cloth is again changed, and the cheese is left in the press till the following morning, when it is taken out, slightly heated before the fire, and again returned to the chesset and the press. When the wet cloths have been changed a time or two, a dry cloth is substituted and a greater pressure applied. The dry cloths are changed every two hours till the cheese is perfectly dry, when it is taken out, the chesset well warmed, and a thin cloth put into it. The cheese is then returned to the chesset for the last time, and subjected to a slight pressure for half an hour, when it is taken out and laid on a plank in a dry situation with a cloth thrown over it for a day or two, and turned over and rubbed with a coarse towel, (taking care not to break the edges,) every two days till it is sufficiently dry for keeping.

To Make and Preserve Sausages.

EDS. CULTIVATOR—I send a receipt for preserving sausages, that is worth one year's subscription to *The Cultivator*, to every family that makes much use of them that does not already know it. Although too late for the last killing time, it will soon come around to another. And while I am about it, I will give my mode of seasoning them, as I have done it for twenty years. For one hundred pounds of meat, 1¼ pound of fine salt, 6 ounces of black pepper, powdered, and 3½ ounces of sage. For market or immediate use, a little more salt might be added.

And now for preserving them. Immediately after the meat is seasoned, make it up into small cakes, (say as large as the top of a tea cup,) and fry them in the usual manner until nearly done—or quite done I think best. Then have clean small earthen or stone pots ready, and pack the cakes in as closely as possible till nearly full, pouring in the fat that comes out in frying them—then put a weight on, sufficient to keep them down until cold. If there is not enough fat fries out to cover them, supply the deficit with clean melted lard. When they are perfectly cold, it is best to put a little more melted lard on, as there will sometimes be cracks made in cooling—put a paper over them, and set them in a dry cool place, and they will keep from New Years till after the next harvest as good as when put up, or very nearly so. They will keep, I suppose, as well in large pots as small ones, until they are opened. It is only necessary to warm them up for use. Try it—there is no mistake in it. I have proved it. E. CROASDALE. *Phil. Co., Pa., 1st Mo.* 29, 1850.

FEEDING CATTLE IN WINTER.—The *American Farmer* says, "a neighbor of ours had an oblong tight box made, with a top—he filled this box with cut stalks, poured over them a pot of boiling water, shut down the lid and put a weight upon it, and thus cooked them with the steam. By the time the water became milk-warm, the stalks were sufficiently cooked. For his milch cows, he had bran or mill feed mixed; and they were always in a thriving condition."

Management of Bees.

EDS. CULTIVATOR—I have perused your valuable journal, *The Cultivator*, for several years past, and find it contains more important information for the young and inexperienced, as well as the aged and practical farmer, than any other periodical of the kind published in the State, and I might add in the United States. I take a number of journals devoted to the "improvement of the soil and the mind," yet there is none, in my estimation, which affords as much useful knowledge to all classes of community as *The Cultivator*.

I will state that I am now in possession of six elegantly bound volumes, which have cost me the price of two young swarms of bees. The information I have gained on this subject alone—the management of bees—has more than doubly paid me for the volumes I now hold. And as there has been less said on this subject than most others, I feel inclined to ask the inexperienced bee-keeper a few important questions: First, did you examine your hives of bees and honey after harvest, and satisfy yourself that each swarm had sufficient honey in store to keep them through the winter without being fed? Each swarm will consume some twenty pounds from the middle of October to the middle of April. If there is even a larger quantity left in the hive, the bees will thrive better the coming summer, and prove more profitable to the keeper. Secondly, is your Bee-House so constructed as to keep the blustering snow storms and cold rains from beating against the hives? If not, it should be so constructed. Bees can stand a great deal of cold during the winter, but they must be kept dry. Hives should be well ventilated. Have you examined your bottom-board, or holes intended for ventilation, to see if they are not closed with dead bees and other filth? If they are, the dead bees should be removed. If not attended to, the chances are, the whole colony will be dead before spring. It is well to examine your hives as often as once a month, during the winter.

I have seen and used many well constructed patented hives, yet I know of none that requires no attention. Bees require but little attention to keep them in a healthy condition, yet that little attention must not be neglected, if you would make them profitable. C. G. J. *Buffalo, N. Y., Jan.*, 1850.

Cows for the Dairy.

Mr. ROBERT GRAY, near Fredericton, N. B., in answer to an inquiry from the Directors of the St. John Agricultural Society, says—"From my experience in the matter, I give a decided preference to Ayrshire cows for the dairy. I believe they will yield a greater quantity of milk, in proportion to the food they consume, than any other breed. Besides this, they are docile and hardy, and will thrive on pasture, and with a description of keep where such breeds as the Short-Horns would starve. They also possess more than average feeding qualities of their own, and when crossed with the Short-Horn or Durham bull, the produce is an animal remarkable for early maturity and a disposition to fatten. If proof were wanting of the excellence of the breed, it would be found in the circumstance that they are carried to almost every quarter of the globe. Large droves are every year taken to England, and during the last ten years, considerable numbers have been taken to the Cape, the Isle of France, to Sweden, Denmark, Belgium, and the United States."

Miscellaneous Items.

MAKING MAPLE SUGAR.—It is surprising how very general the practice is of boiling the sap in large cast-iron kettles. Sheet iron is much cheaper, needs far less fuel, does not crust nor burn round the top, and is decidedly favorable to very clean sugar. A simple mode of making sheet iron pans is described in the *Ohio Cultivator*—the pans being 4 or 5 feet by 2½, 9 inches deep, the bottom and ends one strip of good sheet iron, and the sides 1¼ inch plank. The edges of the iron are punched with holes an inch apart in a zig-zag line, a strip of slippery-elm bark placed between the iron and plank when nailed on, and the whole then placed on a brick "arch" which entirely keeps the fire from the plank sides.

HENS IN WINTER.—S. W. Cole says that hens will never lay well in winter, unless they are made to "scratch for a living." This is done by burying their grain several inches in gravel. He states that eight hens, which did not lay an egg in a month in the winter, by adopting this course, lay 3 times as many eggs the following winter, as their whole feed cost.

FEEDING CATTLE.—Cattle standing in cold muddy yards, exposed to the weather, consume about twice as much as those in sheltered stables kept clean and littered, and free from the accumulations of manure.

The Veterinary Department.

Vermin on Cattle.

EDS. CULTIVATOR—It has long been known that a tincture of the seeds of the common blue Larkspur (*Delphinium consolidum*) will destroy lice on the heads of children, immediately and effectually. Having tried on cattle, with partial success, everything recommended in books, (except preparations of mercury,) I used larkspur seed in diluted alcohol, and the insects appear to be entirely destroyed. The labor of applying it is much less than most other remedies, and it appears to have no injurious effect on the cattle to which it is applied. T. S. GOLD. *West Cornwall, Ct., Jan.* 22, 1850.

Ringbone.

EDS. CULTIVATOR—In the December number of *The Cultivator*, in answer to an inquiry, you remark, "We know nothing of ringbone being fed by a bladder, situated in the heel or posterior part of the foot." If you will turn to *Cole's Veterinarian*, you will find it there described, and the extraction of the bladder, recommended as a remedy. From twenty years observation, I am satisfied that three out of four may be thus cured, and why not the other fourth, is beyond my ken, unless it is because the operation is so slightly performed as to leave a connection between the bladder and the ringbone. But be that as it may, some of the worst cases I have ever known, have been permanently cured. For instance, a colt lame in three feet, all cured at once. A horse that had got into his *teens*, and had been for some months entirely useless, even holding up the lame foot when he moved, was well in two weeks after the operation, &c. The operation is very simple, and can be performed by any one, if the horse is properly secured, and will at most, do no harm. W. *Waterbury, Ct., Jan.* 25, 1850.

We should like to have the opinions of experienced veterinarians in reference to this subject.—EDS.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Pruning the Peach.

Although we have nothing new to offer at the present time on this subject, yet as the time is approaching for attention to the necessary work, we would remind our readers briefly of some of the principal points and advantages.

The peach, of all our fruit trees, is remarkable for its sensitiveness to shade. The leaves and branches positively refuse to grow, unless they can feel

Fig. 1.

the sun-light. Hence, as the tree advances in size, the shoots in the central parts of the head, dwindle, die, and drop off, leaving the more central portions of large heads, with long naked limbs, bearing tufts of leaves only on their extremities, as shown in the annexed figure, (fig. 1.) It is not necessary for us to point out the evils of this result, so obvious to every cultivator.

Fig. 2.

The remedy consists in keeping the leaf-bearing branches thinned out towards their extremities, so as to let the light into the centre of the head, as in fig. 2. This may be partly effected in trees which have been neglected, by cutting out shoots of some years' growth when necessary. But the best way is to cut off, near the close of winter, from one-half to two-thirds of every last year's shoot, all over the tree, commencing this treatment as soon as the tree begins to bear, and repeating it annually as long as the continuance of the tree. This greatly reduces the weight of foliage, and thins the fruit. The crop borne on trees treated thus, is not so great as to numbers, but this deficiency is fully made up in measure, and the quality is incomparably improved. Such varieties as the Heath Cling, which are usually almost worthless, from being crowded on the tree, are the most easily thinned of their crop in this way—far more so than by the more frequent practice of picking off the young peaches.

This shortening of the shoots is so perfectly simple, that the most awkward workman can hardly go wrong, if he only attends to one point, that is to cut off two-thirds of the long shoots and half the short ones. He may do this with a knife, and aided by means of a good standing or self-sustaining ladder. This mode of pruning the peach, although long ago practiced in some parts of Europe, has been but lately introduced to much extent here, where it has uniformly been attended with the best success.

North American Pomological Convention.

The proceedings of this Convention have been published, under the supervision of F. R. Elliott, in a neat pamphlet of 64 pages. It is occupied with a record of the discussions in the Convention; and an extensive and minute report of the state of Fruit Culture in Illinois, by Dr. Kennicott,—and in New-York, by Dr. Wendell; with shorter reports from Wisconsin, by F. K. Phoenix; from Ohio, by F. R. Elliott, and from Vermont, by C. Goodrich. Altogether, it contains a great amount of valuable information on the adaptedness of fruits to the widely differing regions of the whole northern portion of the Union.

The following are the results of the action of the convention, on fruits not brought before the convention the previous year:—

PLUMS.

Smith's Orleans—first-rate.

Duane's Purple—second-rate, ranking high for size and beauty.

Lawrence Favorite—first-rate—not tested at the west.

Long Scarlet—second or third-rate—handsome and fine for cooking.

Lucombe's Nonsuch—nearly first-rate—poor bearer.

PEARS.

Fondante d'Automne, (Belle Lucrative)—first rate.

Dutchess of Angouleme—second-rate. Largely discussed, and taking its great size, free growth and productiveness into consideration, it was regarded by most of the members as well worthy of cultivation—many regarded it as equal in flavor to the Bartlett—but in all cases, it was pronounced worthless, unless upon quince stock.

Gansel's Bergamot—first-rate—somewhat variable—a moderate or poor bearer. Growth of the tree short and stumpy—leaves mealy.

Napoleon—good second-rate—fine grower, and abundant bearer.

St. Ghislain—in most localities, first-rate.

Buffum—a fine grower, but pronounced second-rate by most of the members, and first-rate by a few.

Long Green—second-rate—very thrifty, a good bearer, regarded by some as nearly first-rate.

Julienne—rarely nearly first-rate, often second-rate, and frequently worthless. Never fine unless gathered before fully ripe.

Frederick of Wurtemberg—very variable. When at perfection, very large, exceedingly beautiful, with a brilliant cheek, not exceeded by any wax imitation—needs thinning on the tree, and requires high cultivation—very large specimens had been produced by manuring the trees with bone-dust.

Fulton—nearly first-rate, by some as second-rate—hardy, productive, and adapted to nearly all localities.

Passe Colmar—by some, as second-rate—by others as "king of pears"—requires rich and careful cultivation to attain perfection, and skilful ripening.

Beurre Diel—nearly always first-rate—best on quince stocks.

Beurre d'Amalis—second-rate.

Dix—first-rate—long in coming into bearing—has sold in Boston for $2 per dozen, or $30 per bushel—has rarely fruited in N. Y. or at the West.

Easter Beurre—variously ranked as first and second rate—requires ripening in a warm room, after being kept cool through the winter—if brought too early into the warm room, it shrivels.

Bleecker's Meadow—from second to fifth-rate.

Beurre Bosc—first-rate.

APPLES.

Roxbury Russet—first-rate.

Hawthornden—second-rate; first-rate for cooking—productive.

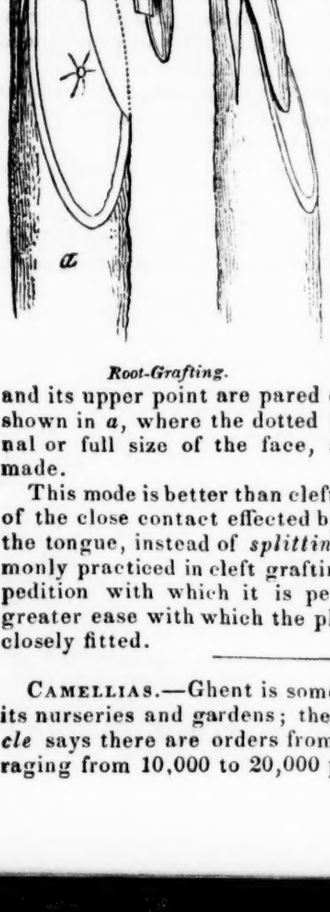
Maiden's Blush—second-rate.

Rambo—very highly esteemed at the West.

Rawle's Jannette—highly esteemed at the West or South West—blooms very late, and hence escapes spring frosts, and a constant bearer—a long keeper—has kept in Kentucky till past midsummer.

Root-Grafting Large Stocks.

In grafting upon large two-year stocks, half an inch or more in diameter, must the graft be placed on one side of the stock so that the bark on one side of each may match? Would you in such case prefer a cleft graft to a splice? *D. Herkimer Co., N. Y.*



Root-Grafting.

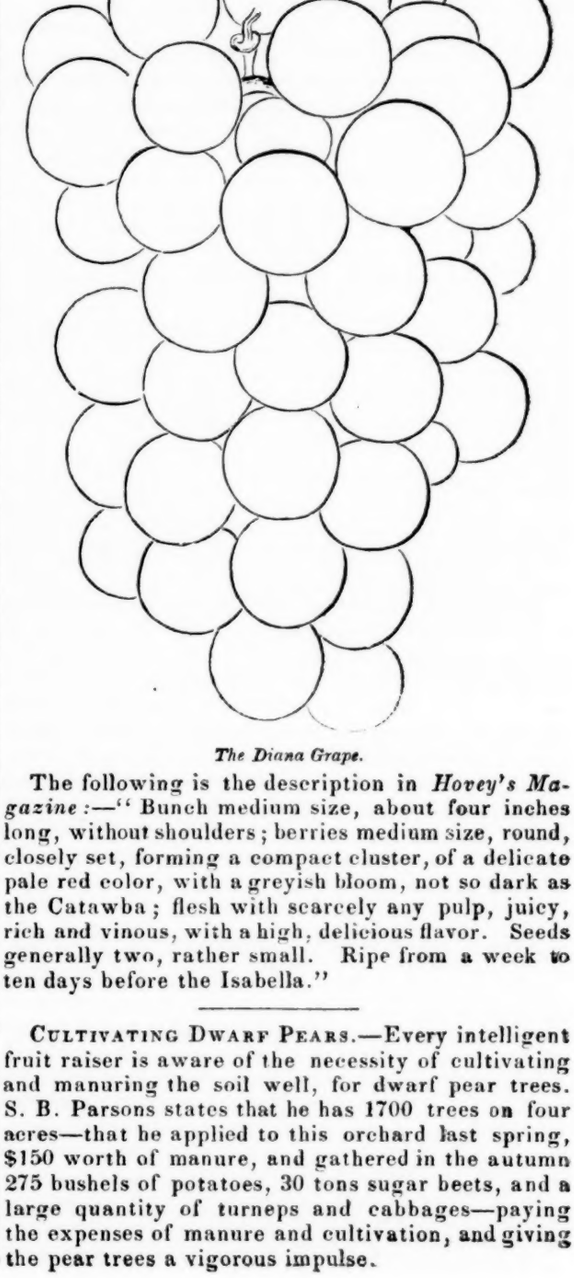
In all cases of grafting common fruit trees, the line between the bark and wood must coincide at some point in both stock and graft. Hence it becomes necessary to place the graft at one side. As we receive frequent inquiries on this subject, we give the annexed figs. to make the operation plain; where *a* is the large two-year stock, sloped and tongued for the reception of the graft *b*, which is also prepared with a corresponding slope and tongue. The mode by which the two are joined by being firmly locked together, is shown in *c*. To facilitate the wrapping of the wax-plasters, one side of the stock and its upper point are pared off with the knife, as shown in *a*, where the dotted line shows the original or full size of the face, after the first cut is made.

This mode is better than cleft grafting, on account of the close contact effected by *cutting* the faces of the tongue, instead of *splitting* them as more commonly practiced in cleft grafting; by the greater expedition with which it is performed; and by the greater ease with which the plasters or wax may be closely fitted.

CAMELLIAS.—Ghent is somewhat remarkable for its nurseries and gardens; the *Gardener's Chronicle* says there are orders from England alone, averaging from 10,000 to 20,000 plants annually.

The Diana Grape.

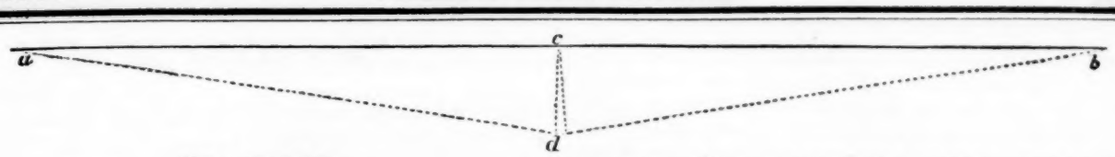
This new seedling American grape, which originated near Boston, appears now to have been fully tested, and has recently been figured and described in the *Horticulturist* and in *Hovey's Magazine*. The former work describes it as "superior to the Isabella and Catawba," and "the best of American Grapes," "ripening a week or ten days before the Isabella." It is of a pale red color, with less pulp and more juice than the Catawba, more delicate, and less of the peculiar wild taste of the native grape. It is an abundant bearer.



The Diana Grape.

The following is the description in *Hovey's Magazine*:—"Bunch medium size, about four inches long, without shoulders; berries medium size, round, closely set, forming a compact cluster, of a delicate pale red color, with a greyish bloom, not so dark as the Catawba; flesh with scarcely any pulp, juicy, rich and vinous, with a high, delicious flavor. Seeds generally two, rather small. Ripe from a week to ten days before the Isabella."

CULTIVATING DWARF PEARS.—Every intelligent fruit raiser is aware of the necessity of cultivating and manuring the soil well, for dwarf pear trees. S. B. Parsons states that he has 1700 trees on four acres—that he applied to this orchard last spring, $150 worth of manure, and gathered in the autumn 275 bushels of potatoes, 30 tons sugar beets, and a large quantity of turneps and cabbages—paying the expenses of manure and cultivation, and giving the pear trees a vigorous impulse.



Wire Fences.

In the last number of *The Cultivator*, A. B. attacks a statement, which gave strictly the results of *ten years'* experience with a wire fence. He commits the most singular error of entirely overlooking one of the first principles of mechanics, in his calculations. A little more modesty of manner would perhaps have been better, in thus deciding on the experiments of another.

In order to make the subject plain, it may be best to go into a little explanation. Suppose the wire, *a b*, ten feet long, is stretched so that a pressure against it sidewise, bending it three inches from a straight line, would snap it. Would the force thus required to break it, be as great as if the wire were drawn lengthwise? According to A. B.'s reasoning, the force in either case would be equal; but according to experiment and mathematical reasoning, the side pressure would be only about ONE TWENTY-FIFTH of the force required to draw it asunder lengthwise. Therefore, if a number 10 wire will sustain a longitudinal stress of 1500 pounds, as stated by Engineer ELLET, then a side pressure of more than 60 pounds would break it, if stretched as stated above.

For, in the action of all mechanical powers and forces, as every one perhaps knows, whatever is lost in distance is gained in power. But in pressing the wire three inches aside, it is drawn only about an eighth of an inch in length; consequently the force exerted, moving 25 times as far, is increased 25 times in power.

The dotted lines, *a c*, *b c*, show the position of the wire when pressed aside. If the wire were divided into two equal parts at the middle, the two ends would form the two curves *d c*. The sines of these curves would be the distance moved by the side pressure; and their versed sines, (bearing a very small proportion to them, but varying with the distance of the side pressure,) would show the actual increase in length in snapping the wire.

In all the different modes of constructing wire fences, it will be observed that effort is made to stretch the wire straight, which increases their liability to be broken, as shown above. I have seen a wire, strong enough to bear a draught lengthwise of 500 pounds, broken like burnt flax by a half year's calf, after the wire was stretched with the moderate strength of a man. A rod of iron, one-third of an inch in diameter, will bear a force lengthwise of nearly three tons weight; but when slightly stretched, I have seen such a rod broken by the bounding of a large steer against it.

Albany and Rensselaer Horticultural Society.

The annual meeting of this Society was held at the Rooms of the N. Y. State Agricultural Society, Feb. 6, 1850. JOEL RATHBONE, Esq., who had been the presiding officer of the society since its organization, declined being a candidate for re-election. The officers elected for the current year, are V. P. DOUW, of Greenbush, President; E. P. Prentice, Mt. Hope, Herman Wendell, Albany, Stephen E. Warren, Troy, Amos Briggs, Schaghticoke, Vice-Presidents; B. P. Johnson, Albany, Secretary; Luther Tucker, Albany, Treasurer.

The exhibition on this occasion, was not large, on account of the severity of the weather—the mercury having been several degrees below zero; but there was, nevertheless, a tolerable show of fruits and vegetables, and a highly interesting display of plants and flowers—several of the specimens being new and in fine perfection. Messrs. Rathbone, Douw, Menand and Wilson, presented handsome collections of several kinds of plants. Mr. Wilson showed many varieties of Camellia Japonica, among which was the new seedling *Abby Wilder*, raised by Col. M. P. Wilder, Boston. The specimen exhibited, fully supported the high encomiums that have been bestowed upon it, and by unanimous consent, it was placed *first* among many fine kinds brought out on this occasion.

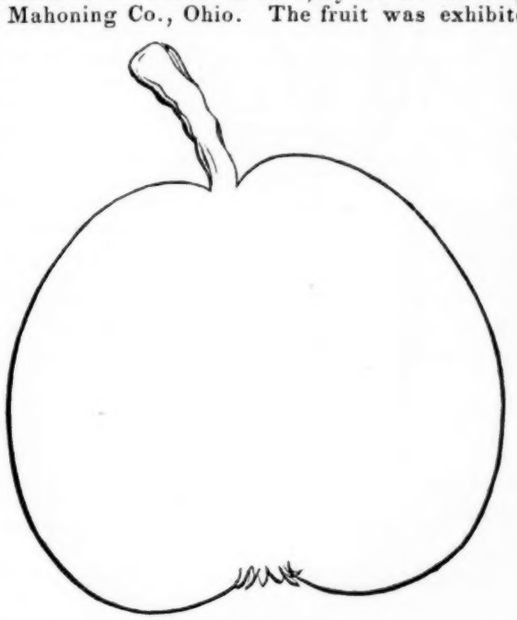
An herbarium, comprising upwards of one hundred specimens of plants, beautifully preserved, was offered for exhibition by Miss Eliza Cary, of Albany. It attracted much attention and high praise.

Messrs. Prentice, Morgan, Wendell, Gould, and others, each exhibited several varieties of apples. Dr. Wendell also showed samples of the Inconnue Van Mons pear. Joseph Cary showed excellent specimens of Isabella grapes. J. S. Gould exhibited very fine specimens of cauliflowers, which had been formed, chiefly, after the plants were dug, last fall, and planted in the cellar.

Kirtland Pear.

(*Syn.* Kirtland's Seedling, Seedling Seckel.)

One of the finest of all the new American pears, is the variety lately introduced to notice by Prof. J. P. Kirtland, of Cleveland, Ohio, and raised from the seed of the Seckel in 1819, by H. T. Kirtland, of Mahoning Co., Ohio. The fruit was exhibited



The Kirtland Pear.

at the fair of the N. Y. State Ag. Society held at Buffalo in 1848, from a specimen of which the accompanying figure and description were drawn. A colored figure appears in the Proceedings of the North American Pomological Convention, lately published.

Description. Size medium; form roundish-obovate, regular; nearly the whole surface a rich cin-

namon russet, resembling in this respect, the Doyenne gris, reddened to the sun and greenish in the shade; stem three-fourths of an inch long, thick, curved, slightly sunk; calyx reflexed, in a moderately deep basin; flesh very buttery, melting, rich, perfumed, of excellent flavor, equalled by very few sorts. It ripens early in autumn, before the usual pear season, which increases its value. The growth is vigorous. Dr. Kirtland states that "in hardiness and productiveness it far excels the parent Seckel; and in point of flavor it is esteemed as superior by many people."

Mulching Cherry Trees.

Cultivators have often lost newly transplanted cherry trees by the drouth of summer, after they have come out finely in leaf, and given promise of vigorous growth. We believe that no tree is more benefitted than this by mulching, or shading the soil with a thick coat of leaves or litter. During the past very dry summer, some very decided proofs of its eminent advantages were furnished, where dwindling trees were speedily restored to health and thriftiness, where neglect had not proved fatal. A Cincinnati correspondent of the *Horticulturist*, who remarks that "nature always mulches," states that by low heads, shaded position, and thorough mulching, he has succeeded in raising flourishing trees in that unfavorable climate, where formerly he had lost every one the first or second season.

Notes on Plums---The Curculio.

I. ELFREY, OR ELFREY'S PRUNE, of Downing.

I think this plum is not sufficiently known. It is a thrifty, hardy seedling, which bears most abundantly. It is well, though very briefly described by Downing. Its fruit, when perfectly ripe, is nearly first rate. Considering also, its slight exposure to the curculio, and its adaptation to sandy soils, it certainly should rank with the best varieties. I know of two families who cultivate the finest varieties of plums, who yet prefer the Elfrey to every other, as a constant dessert plum.

There are two facts in regard to it, not noticed in any of the books. The one is, the depth of its suture, on one side, extending often quite to the stone, even in the largest and most luscious specimens. The stone, too, as has been observed, frequently splits into two when the plum is opened. The other facts relate to the shape of its buds. These are blunt at the base, and the whole bud appears as set on mechanically.

This plum is very little liable to rot in hot and wet weather.

II. A PLUM WITHOUT NAME.

I found on the grounds which I occupy, a plum which I consider very valuable, especially as a market plum, and which I cannot identify with any name in the books. As it produces the same from the suckers, it is of course a seedling.

The *tree* has a most perfectly wild appearance. It is a slow grower, dwarfish, hardy, has a broad, spreading, very close head, with small, wiry, and rather drooping branches. It is slightly thorny; and was mistaken by an intelligent grafter, for a wild thorn, and as such was actually grafted with a pear scion.

Fruit, smallish, round, with a slight suture on one side; colored like the Bleecker, (Lombard of Downing,) covered profusely with a very white bloom. The whole fruit, when divested of its bloom, is exceedingly like the Lombard, only rounder, and with a little more acid next the stone, and a little later.

Other valuable points of this Plum:—1. Hardiness. 2. Nearly an annual bearer. 3. It matures its fruit when profusely bearing, better than any plum of my acquaintance. 4. The tree is scarcely at all liable to the black knot. 5. It is equally safe from the curculio. 6. It flourishes in a sandy soil. 7. The limbs never break with over bearing, even when the fruit lies in actual heaps upon the tree. 8. The fruit never rots. Eatable specimens were found, on the ground, under my trees, as late as the 22nd of October.

III. THE CURCULIO.

In the absence of novelty on this subject, corroboration may be valuable.

With an assistant, I spread two large sheets of white cloth under the tree, jar the tree suddenly, and kill the insect by a pinch of the thumb and finger. Three or four visits to the tree, after the curculio begins, have been found sufficient. To jar the tree, I use a stick made like a short flat ball club, covered with three or four thicknessess of carpet. With this in one hand, applied to a limb, and struck with a stone hammer in the other, the insect can be brought down with great certainty. I began with a long club covered with carpet, but found it bruised the bark quite frequently.

To perfect this plan, I would cover a square frame of poles with white cloth, leaving a slit in one side to the centre of the frame, so as to admit the tree.

The labor of taking care of a large plum orchard during the short season that the curculio works, is nothing to be compared with the value of the fruit saved. It should be known that plums, already stung, may be saved by cutting out the egg with the point of a sharp pen-knife. The curculio with his proboscis, turns up a little lip of the fruit, and lays his egg in its centre, where it may be seen like a minute drop of water. When the egg hatches, which it does, in a very short time, the worm drops down into the cavity made by the turning up of the lip, and finds his way to the centre of the fruit with incredible swiftness.

IV. PLUMS KILLED BY FRESH STABLE MANURE.

Having read, somewhere, that fresh stable manure put around fruit trees in flower, would repel the curculio, I put some around my plum trees. As I had to take the manure when it was offered for sale, I was obliged to apply it a little earlier than I desired. Soon after a heavy rain fell, washing, of course, the soluble portion of the manure down upon the roots of the trees. Quite a number of valuable bearing trees died outright, and numbers more were seriously injured. This was dear bought experience.

I doubt the feasibility of this plan of repelling the curculio. If the weather be dry or windy, it can do very little good, unless the quantity be large, and then you endanger your tree. Fruit trees growing near to stables and hog pens, would more probably be benefitted. C. E. G. *Utica.*

Cultivating Young Orchards, &c.

I observe that it is recommended in plowing among fruit trees, to use "short whiffletrees." A friend, I notice, uses leather traces, with a flap of the same sewed on the outside of each near the end, sufficiently large to cover the ends of the whiffletree, which prevents the possibility of galling the trees.

I understand that the hickory tree may be grafted and transplanted successfully. I have tried graft-

ing them but without success, and on account of their being tap-rooted, they seldom live when transplanted like other trees.

I wish to ascertain the proper method of transplanting hickories, and also the best time for cutting and setting the grafts. W. *Waterbury, Ct. Jan.*

Horticultural Miscellanies.

Mostly copied or condensed from the Proceedings of the North American Pomological Convention, 1849.

Wide Extension of Roots.—E. Harkness, of central Illinois says, "I have found the roots of young apple trees, not more than four inches in diameter, which had penetrated *four feet downwards* into the the clay subsoil, and *ten feet* from the collar of the tree," or occupying a bed of earth four feet thick and twenty feet in diameter. A tree one-quarter the diameter, or the size usually sold at nurseries, must have a proportionate extension; hence, in cutting a circle with the spade only a foot in diameter. in transplanting, a large portion of the roots must be cut off and left in the soil.

Manure for Fruit Trees.—Dr. Kennicott, speaking of the fertile lands of northern Illinois, says, "For fruit trees, especially the apple and quince, I have found barn-yard manure, half-decayed chips, charcoal, and ashes, [mixed] serviceable. I have tried lime, but except on a small peaty spot, without benefit. Mr. Dunlap says he has killed apple trees with ashes—perhaps he gave them too much. I have found them decidedly serviceable." Yard manure alone is not recommended for that region, and for peaches, plums and cherries, is considered positively injurious.

Fruits for Wisconsin.—F. K. Phœnix gives the following as the result of his experience with the cultivation of fruits in Wisconsin, where the thermometer often sinks to 20° below zero. *Plums*—Duane's Purple, Smith's Orleans, Emerald Drop, Imperial Gage, and Long Scarlet, prove *tolerably hardy*. *Hardiest Pears*—Urbaniste, Flemish Beauty, White Doyenne, and Easter Beurre. The Bartlett, unusually tender. Of *Cherries*, Mayduke, Arch Duke and Downer, are hardiest. The Clinton grape is perfectly hardy—the Isabella needs covering. Of *Apples*, Early Harvest, Keswick Codlin, Dutchess of Oldenburg, Drap d'Or, Fameuse, Autumn Strawberry, Pomme Gris, and others, are hardy, and maintain their eastern reputation. Rhode Island Greening, Roxbury Russet, Baldwin, Rambo, Esopus Spitzenburgh, and others, are tender. The application of old, well-rotted manure, in moderate quantities, induces an early maturity in growth in apple trees, and enables them the better to withstand the cold of winter.

Leaf Blight in the Pear and Plum.—F. R. Elliott says,—"The leaf-blight has been more extended in the pear and plum this season, than in any previous one in Ohio. Application of common salt and wood-ashes to one tree, and wood-ashes alone to another plum tree, has rendered them free from leaf-blight, and a continued healthy appearance throughout the season. Application of poudrette, ground bones, ashes and lime, all mingled, have rendered pear trees healthy and free from leaf-blight, while those 30 ft. distant, without such application, have been affected.

Fruits at Plattsburgh, N. Y.—J. W. Bailey states that he has found the application of leached ashes a preventive for mildew in the *gooseberry*. Out of 300 peach trees *in bud*, many were killed to within a few inches of the ground, and only about 20 of the inserted buds survived, having had no protection, and the thermometer being for *nineteen* days, below zero, and at one time 20° below. The most profitable *apples* at that place are Early Harvest, Bough, Toole's Indian Rareripe, Esopus Spitzenburgh, Rh'd Island Greening, Swaar, Roxbury Russet. Fameuse has proved very fine, till lately affected with bitter rot. Westfield Seeknofurther, of second quality, and moderately profitable. Pomme Gris, "the richest of all winter apples," but too small for profit. St. Lawrence, profitable as a cooking apple. Rosseau, unprofitable; Bourassa, uncertain; Yellow Bellflower, promising well.

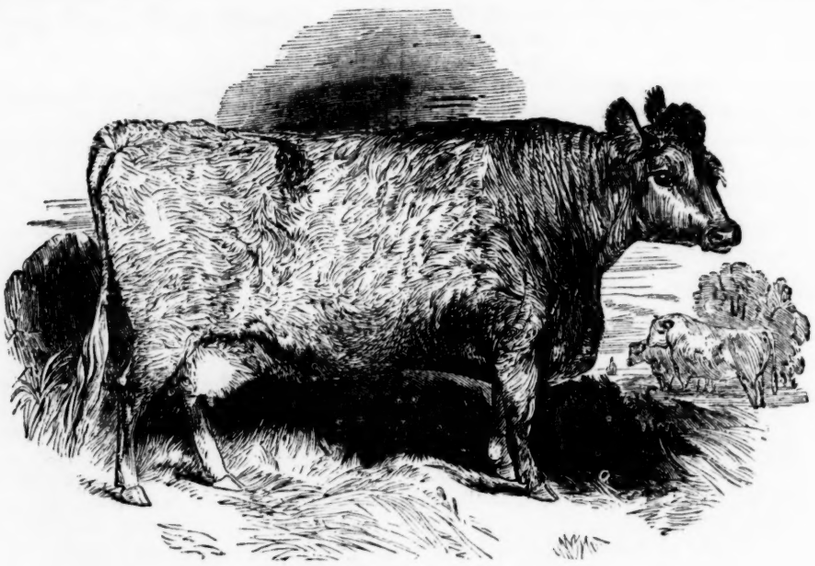
Louise Bonne of Jersey.—This fine variety of the pear, so peculiarly adapted to the quince stock, is remarkable for its early productiveness. The N. E. Farmer states that two trees were bought in the autumn of 1848, by J. Washburn, of Plymouth, Mass. for $1.25 each. The next season he received a $6 premium for a select dozen of pears which they bore, and $3 for the pears. It is scarcely necessary to say that their cultivation was by no means neglected.

Grafting and Improvement.

The address of J. R. Williams, before the Kalamazoo Agricultural Society, Mich. contains much good sense. The following remarks on the ease with which every man may improve the quality of his fruit, are applicable to latitude and meridian of other places besides western Michigan:—

"As it is with animals and vegetables, so it is with fruits. You can have stunted, astringent, crabbed fruits, or the most delicious. The precaution to send your neighbor's boy to snip off a shoot from a fine tree, while you are stopping to decide the affairs of the nation with him—a few minutes taken to slide it under the bark, while you are waiting for a meal at home, will transform a useless shoot into a valuable tree, that shall furnish pleasure and nutriment to generations of men. A few minutes improved now and then which would be otherwise idled away, will surround your dwelling with a grove, which shall prove of the greatest utility, and delightful embellishment. I know men say they have no time, yet I have always observed that the men who make this excuse, have plenty of time to lounge at the tavern,—plenty of time to run after some mountebank or charlatan, plenty of time to litigate with a neighbor. No, man! plant the tree. It will grow while you sleep. Bud it. Graft it. Nurse it, and it shall gladden the sight and please the palate of people yet unborn, and you shall have a memorial of your existence, springing from the green sod, when you shall repose beneath it.

"Some five or six years ago, I found on the place where I reside, some scrubs of natural fruit. The tops of my trees my neighbors said were too large to graft. But they were grafted with considerable labor. My predecessor might have budded or grafted each with a single germ, and saved me nineteen-twentieths of the time and expense. Another set of men told me the country was not natural for fruit. I put in the grafts and for years have had an abundance of delicious fruit for the table or cookery, for myself and my neighbors, in summer, fall, and winter, and I find none will eat it more greedily, than those who have no time to graft their own trees, and who curse the climate as unfit for fruit."



SUFFOLK COW.

Suffolk Breed of Cattle.

The origin of the various polled breeds of cattle, is involved in some doubt. There has existed from the earliest times to which history reaches, a stock of wild cattle having generally this peculiarity, and they are carefully preserved at this day, in Chatelherault Park, Lanarkshire, Scotland,—the residence of the Duke of Hamilton. But whether this is the parent stock of the present polled breeds, is a question not so easily settled.

The most noted of the domestic varieties of polled cattle are the Galloway, the Angus, the Norfolk, and the Suffolk. Of the latter, represented by our cut, Martin gives the following description:

"In Suffolk, a breed of polled cattle, known by the name of Suffolk duns, has been long celebrated; though the dun color is now by no means a common character; indeed it is not preferred; for with late improvements, other colors, as red, red and white, brindled, and yellowish or creamy white, have almost abolished the dun. There can be little doubt but that the polled Suffolk cattle owe their origin to the Galloways; not that they are of the pure strain of the Galloways: on the contrary, they are the result of interbreedings with them; and their chief qualifications are as milkers, rather than feeders; although, in this latter respect, even the lean cows when dried, show no little of the properties of their Galloway progenitors. A good Suffolk milking cow is lean and spare, with a light thin head, a clean neck, little dewlap; slender, but short limbs; a heavy and well-ribbed carcass, a large udder, and swollen milk veins. Generally the hip bones are high and prominent, the loins narrow, and the chine hollow. There is in all this, nothing of the true Galloway contour, and where the points characteristic of this breed prevail, though but in an inferior degree, the animal is fitter for the feeder than the dairyman.

"Few cattle excel the Suffolk as milkers; a good cow, in the plentitude of her milk, will often yield six gallons a day; some have even yielded eight.

"The Suffolk dairy-farmers in general pay but little attention to their breed of cattle; or rather, are actuated by no sound principles. They usually kill the bulls in their fourth year, irrespective of their intrinsic excellence; and the valuable and the worthless share the same fate: consequently, should the progeny of any particular bull exhibit more than ordinarily good qualities, the chance is, that no advantage can be taken of the discovery, the sire having been slaughtered before it was made. Besides, the bull is in perfection from his fourth to his seventh year, and this is an important consideration. The heifers are also bred from at too early an age, before the system is fairly matured; in consequence of which their growth is stopped, or their constitution enfeebled. Indeed, unless the cows display more than ordinary qualities as milkers, it is not unusual to fatten them for the butcher at four years of age; a plan which surely cannot be commended.

"When dried, the Suffolk polled cow acquires a good condition with considerable rapidity, and fattens to forty or forty-five stones; the meat is of good quality—that, indeed, of the ox very superior."

In the communication of JOHN W. PROCTOR, Esq., published in our last volume, p. 373, some hornless cows belonging to Mr. STONE, are mentioned as remarkable for the production of butter. Mr. P. has sent us the following letter, received by him from Col. JAQUES, in reply to an inquiry relative to the importation of polled cattle. The stock therein described, was probably the source of many of the hornless cattle, erroneously called Galloways, which have been raised in New England.

Ten-Hills Farm, near Boston, December 10, 1849.

JOHN W. PROCTOR, Esq.—In reply to yours of the 3d inst., I will state, that the only importation of polled or hornless cattle, into New England, of which I have any knowledge, was made about 1797 to 1800. A gentleman by the name of Joseph Russel, then residing in Boston, imported, I think, six cows and a bull, and placed them on what was then called Hog-Island, now called Belle-Isle, situated in the town of Chelsea. They were there bred pure for fifteen or twenty years.

I visited the island frequently, and watched the progress of these cattle. I found them hardy, good handlers, taking on flesh readily, and as milkers, much above our common stock. The calves from the imported stock, were generally raised for breeders, and many were sold. At one time, a large proportion of the cattle in Chelsea, were of this polled breed. But the people of that place gave little or

Dorking Fowls.

At the great poultry show at Boston in November last, some very handsome Dorking fowls were exhibited by Dr. E. WIGHT, of that city. They were bred by him from imported stock. They were of medium size, very beautiful in form, and uniformly of a clear white color. Dr. W. informed us that he had found the stock hardy and prolific; and that after numerous trials he had adopted them for general purposes, in preference to all others.

The above figures were taken from a pair of Dr. W.'s Dorkings, and, excepting some unnaturalness of position, are good likenesses.

The principal points which Dr. WIGHT prefers in his Dorkings, are given by him as follows: "A fine head, with brilliant, reddish-tinged eyes; single or double combs, in both sexes; a graceful neck, rather short than long; wide, deep, projecting breast; the body is not only long, but is round, rather than flat or square; and the legs, considering their large size, short, and invariably of a silvery white. They move with an approach to the majestic. Their colors are (those I have imported at various times) both white and speckled; but I preferred to retain the white, and have bred from them. My stock is now entirely white. A cross with the Dorking, improves the shape of most other fowls."

For a description of the Dorking breed of fowls, see *Cultivator* for 1849, p. 113.

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no attention to the preservation of the breed, pure, and they soon became more or less mixed in blood.

The oxen of this stock, were rather ill-looking animals; often having little, loose horns, attached to the skin only, dangling about their faces. The pure blood cows were frequently allowed to go with any little runt of a bull. The late Dr. Benjamin Shurtleff purchased a farm in Chelsea some 30 years since, and soon after obtained several of these cows. I had frequent conversations with him in regard to them, and he always spoke highly of their milking properties.

The blood of these cattle has been considerably disseminated in Massachusetts, New-Hampshire, Vermont, Maine, &c.; but I think it doubtful if the pure breed, possessing all the original distinguishing characteristics, can now be found in this neighborhood.

There are several varieties of hornless cattle. The Scotch Galloways are celebrated as beef cattle, and are said to give rich milk, but not a large quantity. It is thought they have never been improved by crossing with any other breed. The Suffolk duns have been held in high reputation as milking stock. I am inclined to think the animals of the Russel importation were of this variety. Respectfully, &c.,

SAMUEL JAQUES.

BURNING STRAW.—An intelligent correspondent of the *Prairie Farmer*, says, if he had a thousand loads of straw he should want a good pile of dollars to induce him to set fire to it. He remarks that the rich prairies have a better supply of alkali than of vegetable matter, having been yearly burned from time immemorial. He mentions several instances in which the product was invariably greater where the straw was buried without burning. After his heaps of straw have been soaked with rain, he treads them down with horses, and the next spring the rotted heap is spread on corn ground, where "it shows for itself." On soils with much vegetable matter, burning may be perhaps the best.

PEORIA PORK PACKING.—The number of hogs packed last year in Peoria, Ill., was about 30,000

The Farmer's Note-Book.

Agricultural College.

The Report of the Commissioners appointed to prepare a plan for an Agricultural School and Experimental Farm, has been submitted to the Legislature by the Governor, who commends the subject earnestly to their attention.

Having, in their preliminary remarks, demonstrated the necessity of some liberal provision for a better education of the agricultural class, and for eliciting and disseminating information on the subject of agriculture, the Commissioners proceed to lay down their plan, the substance of which is comprised in the following extracts:

Impressed with these considerations, and desirous of establishing a college for American farmers, the Commissioners, in pursuance of the request of the Legislature, have made full inquiry into the subjects submitted to them, and they feel sensible that an institution founded by the State of New-York, should be adequate to the just claims of the farmers, as a class, and worthy of the character of the State. To combine this with economy, and to make it an institution eminent alike for efficiency, science and practical skill, has been their aim. With these views, they beg leave to recommend that an agricultural college should be established, connected with an experimental farm of 600 acres, which would probably combine sufficient extent and variety of soil for the objects to be accomplished: the farm to be cultivated by the labor of the scholars, who are to be employed four hours a day in practical agriculture, in all its various branches. Among these may be enumerated, the laying out the farm and garden in various modes, adapted to circumstances; the setting out of plants and trees; grafting, budding, pruning, transplanting and rearing of fruit trees; the different modes of fencing grounds, with the relative advantages and cost of each; the various qualities of forest trees, in reference to fencing and building purposes; the best mode of breeding and feeding stock; the comparative advantages of the various breeds; how to discover defects, and the way to remedy or eradicate them; the proper time to sell produce, and how to put it in market; the manner of keeping farm accounts; and, in short, a full course of instruction as to the management of a farm. These scholars to be 16 years of age, to be apportioned among different counties—say two for each Assembly district, to be nominated by the board of supervisors, and the expenses of their tuition, with board, washing, fuel and lights, to be only $100 per annum; as the produce of the farm, under proper management, will furnish no small part of the supplies of the table. Besides these scholars, there may be others admitted, at $25 per annum; who will board in the vicinity, at their own expense, but who will be required to submit to all the college rules, and to labor with the other pupils.

The applicant for admission into this institution, should be well versed in the rudiments of a good English education, and should be subjected to a strict examination on the following subjects: grammar, geography, and arithmetic as far as proportions.

In this examination, regard will also be had to the ability manifested in the ready and practical use of these rudiments, and to the proper mental discipline requisite for the successful prosecution of the course of studies contemplated in the institution.

For the proper management of the institution, there will be required a President, who must be a scientific and practical agriculturist. The plan, therefore of the Agricultural Committee, would require the following professors, viz:

A Professor of Chemistry and Chemical Manipulation.
" " Natural History and Mineralogy.
" " Mathematics, Engineering & Practical Surveying
" " Botany and Horticulture.
" " History, Law and General Science.
" " Veterinary Art and Anatomy.

There should also be a farmer, having cnarge of the farm and stock, a gardener, carpenter, mason, and blacksmith, constantly employed, with the view of giving some practical knowledge of arts so essential in the management of a farm.

Allowing $2.000 salary for the president,	$2.000
And 1,250 for each of the professors,	7,500
400 each for the farmer, &c.,	1,600
1,000 for laborers,	1,000
Contingencies,	500
Stock for blacksmith,	300
	$12,900

The students at $100 each, would contribute $25,-600, leaving a surplus of $12,700, which, with the produce of the farm, would go far towards the support of the college.

The Commissioners would, however, recommend to the Legislature to make an annual allowance for the support of the college, of at least $10,000, until it shall have been ascertained by experience that it can sustain itself.

For the purchase of a farm of the extent required, and comprehending the proper variety of soil, an estimate was made of $24,000, being $40 per acre.

The buildings required would be one for lectures, sufficient for the accomodation of 500 students.

The college halls, comprehending lecture and recitation rooms, library and chemical laboratory, 100 feet long and 60 feet wide,	$10,000
The dormitories, comprehending the president's house, 560 feet long, 40 feet wide,	36,000
Chemical apparatus and library,	10.000
Farm-house and furniture,	3,000
Barns and out-houses, stock and implements,	10,000

A strict account of debit and credit should be kept, under the direction of the President, with every department of the institution, and rendered annually to the Legislature, on the first of February so as to show the profit or loss of each department The institution should be located at some point conveniently accessible from all parts of the State; and the pupil should be taught a varied system of farming, adapted to any market, and also, how to supply himself with the means of fertilizing land wherever he may be placed.

The course of instruction would require an attendance of six terms, one commencing the first of February, and continuing to the summer vacation; the other commencing about the 20th of August, and ending the middle of December. In summer, the scholars would ordinarily be required to labor 4 hours daily, while, in winter, the hours of labor would be one hour in the morning and two in the afternoon. The residue of the day would be occupied in studies, lectures and recitations.

With such a course of education, rigorously carried out, our State would reap, in the benefits conferred on this important interest, a thousand fold all the expenditure made in such an establishment. Careful examinations would be made into all matters connected with agriculture; comparisons had of the various modes of producing certain results, and records preserved, showing which is preferable; authentic statements made of agricultural experiments. creating order and system, and reducing to science the heterogenous and often discordant mass of materials collected in agricultural journals. The cha-

racter of the soils in different sections of the State would be carefully analyzed, and farmers instructed as to the most successful and proper plan of increasing and preserving their fertility.

The best breeds of domestic animals would be here collected, and specimens distributed through the state, to improve the stock in the hands of farmers.

Nor are these direct advantages, great as they undeniably are, at all to be compared to those flowing from the general diffusion of a better system of agriculture. When we reflect that 100 young men, thoroughly instructed in scientific farming, are annually qualified for their business in this institution, it may well be deemed the NORMAL SCHOOL of farmers. In their several districts they will excite a spirit of emulation, both by precept and example. Farmers will feel that their noble pursuit, justly deemed the mother of arts, is honored by public attention, and become the care of the government: that in this Republic, as well as in ancient Greece and China, it is not beneath the dignity of those in authority, to encourage and honor a pursuit that is the chief intermediate agent between man and the bounty of his Creator.

To carry out the views of the Commissioners, the undersigned would recommend that a law be enacted authorising the establishment of An Agricultural College connected with an Experimental Farm, making the necessary appropriations for the object, and directing that eight commissioners, one from each judicial district, be appointed by the Governor, to locate such institution with authority to purchase the farm, and proceed forthwith to erect the necessary edifices, fixtures and appurtenances; to supply the same with suitable farm implements, farm stock and teams; to procure suitable animals of all kinds for breeding the most improved farm stock; to procure the apparatus for a chemical laboratory, and a philosophical apparatus; to purchase a suitable library, not to exceed $5,000 in cost; to purchase and procure whatever may be necessary to put such institution in complete operation, and to select and appoint suitable persons to fill the several professorships and stations connected with the institution.

The commissioners should have power to select three of their number to proceed to the erection of all such buildings and edifices, and fixtures and appurtenances; and the procuring of such implements, farm stock and teams, (as may be necessary;) to select and procure suitable animals for breeding farm stock; to procure such chemical and philosophical apparatus, library, and other things as may be necessary for said institution; and for this service they should receive a compensation of $ per day, while actually employed.

Premium Crops---Bennington Co., Vt.

EDS. CULTIVATOR—Above twenty years ago, an agricultural society was formed in this county; but it did not continue long. Another was established three years ago. Our fair last September was well attended. The show of cattle, horses and sheep, was large, and would have been creditable to larger counties. On the second day, an excellent address was delivered by Judge Ball, of Hoosick Falls, N. Y. The committees on crops, lately met to award premiums. I send you herewith the substance of their reports. JOHN S. PETTIBONE. *Manchester, Vt., Jan.* 19, 1850.

INDIAN CORN—four acres—to Joseph Parker, of Rupert, the first premium. The product was 427 bushels and 47 quarts. The land had been down to meadow four years. The land was plowed deep, and 20 loads green manure per acre turned under. It was plastered three times, and about 12 bushels of ashes applied to the piece.

The 2d premium on four acres was awarded to Lemuel Bottom, of Shaftsbury, average 68 bushels per acre. Land sandy loam. The three years previous, down to meadow—30 loads coarse manure per acre, spread on before plowing; plowed the 1st of May—then harrowed and marked out both ways, 3 feet 1 inch apart; manured in the hill, 10 loads per acre; planted 15th May; seed rolled in plaster; hoed 3 times; cut up about the 20th of September. Whole expense for four acres, $26.75.

Best one acre of corn—the first premium was awarded to W. R. Dean, of Manchester, 111 bushels 27 quarts per acre. Land, loam; plowed and rolled on the 9th September. In the spring, 55 loads of coarse manure were carried on; then plowed, then spread on 10 loads fine manure and harrowed; planted 18th May, 3 feet 3 inches apart each way; seed, long 8 rowed corn. It was plastered soon after it came up, using half a bushel of plaster; hoed twice, plastered second time hoeing with ¾ bushel. The land had been down to meadow ten or twelve years.

The second premium to D. Spenser, of Shaftsbury, 108 bushels; land had been down to meadow several years; manure spread on before plowing, and ten loads sheep manure after plowing; planted 3 feet 4 inches each way.

Third premium on one acre, to Robert Ames, Manchester, 106 bush. per acre; land gravelly loam; 30 loads coarse manure spread on the acre and plowed in; harrowed, then spread on 12 loads fine manure; planted 3 feet 3 inches apart each way.

F. Canfield, of Arlington, presented one acre; land gravelly loam; crop much injured by the drouth; gave 85 bushels per acre; the samples from this field were the best presented, being very hard and dry.

Best half acre of corn, to George M. Vaughan, of Arlington, 57 bushels 17 quarts. The land on which this corn was raised had been, till about 1814, a pond of water. The outlet was at the south end. A sand ridge 50 or 60 feet above the water at the north end of the pond, was tunnelled by S. Deming, Esq., of Arlington, and the water drawn off to the north. Nearly 30 acres of land was thus reclaimed. The descent from the tunnel was 8 or 10 feet lower than the pond, and the whole embankment was carried away, so that the stage road now passes through this gulf. The land was put down to meadow, notwithstanding there was a descent of 8 or 10 feet to draw off the water; and a channel 3 or 4 feet deep through the meadow, was cut by the current. Yet the land was sowed, and produced coarse grass. Mr. Vaughan has cut several ditches on the margin and through the meadow, 2½ or 3 feet deep. Between these drains, the corn was grown. The advantage of draining was clearly demonstrated. The corn produced was a new kind, produced by a cross of the 8 rowed yellow corn, with the white 8 rowed and red blaze variety. These kinds were three years ago, planted side by side, and the seed selected which was most equally mixed, and planted the next year by itself, apart from any other corn; and from seed selected from this crop, the corn of last year was grown. The sample presented was a beautiful 8 rowed yellow corn, each ear being marked on the top with the red blaze. The ear is long, with a small cob. We were informed by Mr. Vaughan, that the top of the stalk or tassel, was of the red blaze mark. Mr. Vaughan is an enterprising young farmer, who by his industry and good judg-

ment, is making great improvement in farming. A little *book knowledge* would not injure such a farmer.

BARLEY—1st premium to John W. Vail, of Bennington; 50 bushels per acre; sowed after corn, with the two-rowed variety, 3½ bushels per acre; weight 47½ pounds. Four bushels is recommended to the acre, for seed.

George Barnard, of Dorset, raised 25 bushels from 1¼ bushel of seed.

SPRING WHEAT—Premium to Nathan Bates, of Shaftsbury; 22½ bushels, on meadow land turned over; one bushel western plaster per acre; no other manure.

RYE—Premium to M. Wheelock, of Shaftsbury; 22½ bushels per acre; meadow turned over; no manure.

BUCKWHEAT—one acre; premium to F. H. Canfield, Arlington, 33 bushels per acre.

OATS—1st premium to Alonzo Hinsdill, Bennington, 503 bushels on five acres. 2d premium to L. Bottom, Shaftsbury, 90¾ bushels per acre. 3d premium to S. Ames, Shaftsbury, 78½ bushels per acre.

BROOM CORN—1st premium to Alonzo Hinsdill, Bennington, 444 lbs. clean brush per acre. 2d premium to P. M. Henry, Bennington, 375 lbs. per acre of clean brush.

Growing Potatoes from Seed.

EDS. CULTIVATOR—I see by the January number of *The Cultivator*, that Mr. CHARLES W. TAYLOR, of Bucks Co., this State, has given you a statement in regard to the rot in potatoes still prevailing in his vicinity, and then goes on to say that he received some seeds of the potato from Rev. N. S. Smith, of Buffalo, and after giving the result of his experiment, is "sorry to add that they rot as bad, or even worse, than any of our other kinds; although they had the advantage in regard to time of planting, manure, situation, &c."

Now as I also was a recipient of Rev. N. S. Smith's favors, having received a half-ounce of his seed last spring; my experience with these seeds being somewhat different, or at least my success with them, leads me to a different conclusion, as regards their healthy nature; I will state the result. I also started the seeds in a hot bed, (about one-half of them) in the spring, and at the proper time transplanted the small plants to the open ground. As we had a long spell of dry weather in this section, commencing about the middle of June, and (with the exception of two or three sprinklings of rain,) continuing to the first week in October, a period of over 100 days. During all this time, vegetation was at a stand still. These small potato plants consequently suffered severely, many, nearly one-half, died from the heat and drouth. The balance remained stationary and barely alive, till a few weeks of moist and warm weather in October gave them a start, when frost arrested all further growth. I then took them up, and the produce was over a bushel, from the size of a pea, up to the size of eleven inches in circumference—of all sorts, sizes, shapes, colors and qualities.

Now as regards the rot. Although we had no *rot*, properly speaking, on any of our potatoes in this section of country, that I am aware of, last season, yet the plants of all the old varieties appear to lack that healthy, vigorous and flourishing appearance, which in former times, (that is previous the rot being known,) belonged to the plants. Indeed it is a rare thing now, to find the common, or old varieties, producing flowers and seed balls, and the plants generally have a yellow and sickly appearance. On the contrary, these seedlings, when the wet weather commenced, at once put on a healthy, robust, and thrifty appearance, such as I had not seen for years. The plants were literally covered with blossoms, and had more the appearance of a row of *flowering plants*, than an esculent vegetable, producing seed balls in profusion; owing to the lateness of the season, however, they had not time to ripen. Now of course, I am not prepared to say that these seedlings will retain this healthy condition another year—or that they will escape the rot any more than the old varieties; but the presumption that they will do so, is greatly in their favor. J. B. GARBER. *Columbia, Lans. Co., Pa., Jan.* 14, 1850.

Application of Marl.

EDS. CULTIVATOR—I have a great quantity of blue marl. I spread some on grass land one year, and it took all the grass out by the roots. I again spread some on the land another year, and plowed it in, but did not perceive any benefit from it. The marl is about one hundred feet above the tide, and is full of different kind of sea shells. My farm contains 477 acres of land, and there is about one hundred underlaid with this marl. The surface is a tough sod for about eight inches, and then you come to a rusty sand, about a foot deep, and then to a black or dark blue marl, soft and full of shells, about three feet deep; then to a whitish marl, rather harder and full of shells, and when it comes to the air it slackens, like lime, so that you can shovel it up as you might a heap of ashes. I would like to know in what way it can be made profitable. JOSEPH WARTON. *Saint Andrews, N. B., January* 15, 1850.

We should be glad to receive suggestions in reference to the above. EDS.

Sheep Husbandry.

EDS. CULTIVATOR—Mr. St. John, whose profitable sheep husbandry was noticed in your paper of this month, is beyond doubt a skilful shepherd, and many of your readers will be divided in opinion whether his profits were 27 or exceeding 100 per cent. Now Mr. Pettibone, whose very intelligent communication was published in your paper in April last, will tell you that the hay those sheep consumed during the winter at $7 per ton, would cost $60. Mr. St. John will tell you that seven of those sheep did consume as much pasture as one cow. Estimating the pasturage of a cow at two shillings per week, would make the summer pasturage of these sheep worth at least $50. Now add two dollars and fifty cents for washing and shearing, and it would leave a little less than 7 per cent. profit on the cost of those sheep. In the estimated expense, no account is made for grain fed to make sheep fetch, without their fleeces, 18 shillings per head, which cost but 9 shillings at their purchase, or for their care in summer, or the foddering of sheep and nursing of lambs during winter.

Another consideration. Those lambs, to be yearlings now, must have been winter lambs; and their feed from January to July, is deserving some little consideration in the account; particularly when 45 sheep with them included, are estimated to be worth more than fifty of the original stock.

It certainly can be no imputation upon our farmers that they do not grow wool enough to meet the consumption of the country, when they have no greater encouragement than the success of Mr. St.

John, favored as he was in location, in good luck, in good sense, and in skill and experience. A FARMER. *Hillsdale, Feb.* 4, 1850.

Green and Dry Wood.

EDS. CULTIVATOR—"Green wood will last longer than dry; and so will straw for cattle last longer than hay." This declaration was long since made by an author calling himself "The Prompter." But durability is one thing, and utility is another; and who has not learned the comparative value of green and dry wood? And yet how few lay up in store for an equinoctial rain, or a winter's snow! And how many, otherwise good providers, perhaps, have put off the building of a wood-house for ten, twenty, or thirty years, and many who have one continue to simmer away their two barrels of water from nearly every cord they burn. All will admit these things ought not to be so; but the most common objection to the timely preparation of wood, is the great amount of labor required at one time; and for this reason it is deferred to a "more convenient season," or until it *must be done.*

And now, as the time for getting good is close at hand, I would beg leave to present to your readers a remedy for some of these evils, and hope my brethren of the mallet and the plow, will not think me egotistical if I should make some allusion to my own experience.

Let trees be fallen and cut at such a length that a team will draw them on a bob-sled, to the place desired. Lay them together on poles lying at right angles on the ground; attach a cross-cut saw to a horse-power so geared that the crank will make about thirty revolutions, while the horse goes once round a circle of about twenty feet diameter. If the horse is a good walker, this motion is quick enough for the safety of the saw, and if well constructed, one horse will do the work; but two are better to keep up a strong steady motion. A light balance wheel is necessary to give regularity to the motion. Two posts should be erected about 2½ or 3 feet apart, one side of each, nearly in line with the saw, a square groove in the sides, next the saw; another piece fitted and screwed on at the top and bottom, with a corresponding grove; the wood about an inch apart, with the saw between. Next four pieces of hard wood so fitted as to slide in each groove and nearly touch the saw. Let each pair be screwed together above the saw with two wood screws, pinching a piece of hard leather at each screw, nearly to the thickness of the saw; the lower piece between the lower screw and the back of the saw; the slides of sufficient length to keep the saw steady, and play so easily in the grooves as to rise and fall with the saw.

There should be a safe and convenient way of raising and letting down the saw, without stopping the horse. I prefer a ten or at most a twelve inch crank, and a pitman, in two parts, introduced with a joint into a swing, suspended some ten feet above. A rail track thirty or forty feet long, placing the end of each bed-piece at the posts through which the saw plays. The car which carries the last end of the log, may be made with two wheels and an axle, with arms framed into the back side at such an angle that the ends will follow the wheels, and so beveled forward that the weight will be a little back of the bearing, and to this axle the log should be dogged firmly. The first end of the log should rest on a roller or windlass, the middle so girdled down that the log will keep the centre, and spikes driven in to draw the log forward. A piece should be fastened to the out side of one of the posts, about even with the bottom of the log, for the block to rest on until it is sawed quite off, the other end to be raised or lowered at pleasure. Without this, the block will frequently drop, taking a sliver with it which may make trouble. The pitman should find a resting place when the saw gets through, so that if it is not raised immediately, it can do no injury.

Such a machine has no electro, nor railroad speed, but it is got up mechanically; is a good investment of some fifty dollars; but if "botched up," it will probably prove a failure, and be thrown away in despair. I have used one four seasons. My custom is to haul the wood on snow—a supply for a year or more; in the spring saw and split, throwing it into a pile; let it lie through the summer, and then put it into the wood-house. One man finds business enough to split and throw back as fast as it will saw. I find it an easy and quiet way of making wood.

For sawing wood exclusively, I would recommend a cast-iron horse power, with just wheels sufficient to get up the motion; as it would probably be the cheapest and most durable, and when the sawing was done for the season, it might be put away. A buzz saw might be connected to saw the limbs. The advantages of using mostly dry wood for a stove, are many. There is the joy-lighted countenance of the "better half," the pleasure of children, comfort of guests, the ready kindling, warming and cooking; and when the wood is cut in this way, the uniformity of length, the saving of labor, the saving of logs that would otherwise go to waste, the saving of chips, and the having it done up for the season. CALVIN STOW. *Braceville, Ohio, Jan.*

Muck as the Basis of Compost.

EDS. CULTIVATOR—The subject of manure, is one of increasing importance in the older sections of our country, and especially in New England. The increased facilities for transportation are bringing the products of the virgin soil of the west, in direct competition with our own, at the same time that our hill-sides are degenerating by continued cropping and the washing of rains. Far be it from us to decry the improvements in locomotion. We could not, if we would, and we would not if we could, put one straw on the track of the iron horse. We might as well dam up the waters of the Mississippi with bulrushes, as stop the flow of western products into our eastern markets. We do not murmur at this, but rather with an enlarged view of the prosperity of the whole country, gird our selves anew for a noble competition with our wes tern rivals.

We do not propose to consider here what changes the eastern farmer might make in the products of his soil, to meet the new exigency in his situation, but rather very briefly suggest what change can be made in the soil itself. If any one thinks that the same crops can be raised, that his father has raised before him, and with the same cultivation, he is behind the times. Fortunately there are few such among us. All the considerate, are looking to the compost-heap, as alone affording the *ammunition* wherewith to contend against our western rivals. As the basis of this compost-heap, I would urge the claims of *muck*, the partially decayed vegetable matter abounding in our swamps. With this resource on his farm, every farmer can double his manure and consequently his products. I speak not from theory, merely, but from actual experience, for in the past six years, the yield of my farm

has been more than doubled, and the increase has been owing mainly to the use of muck in the compost-heap; and I am by no means satisfied that the maximum product has been attained.

My mode of operation is to draw from the swamp whenever leisure permits, and line my barn and hog yards with the muck, a foot thick. Whenever the hogs have well composted their allowance, (and they work very cheap,) I give them another. Also under my horse-barn, and under my stable windows, I am sure to put a coat of muck, whenever there is a sprinkling of manure. By the side of my swamp, I draw out, mostly in the winter, different piles, and with one, mix a few ashes say one load of ashes to ten of muck, and with another a little manure, if it can be bought—say one load of manure to three of muck—and with another a dead horse from the neighboring village. These separate deposites are shovelled over as convenience may allow during the summer, and in the fall mostly used as a top-dressing on the meadows. I have never known lands thus treated that were not grateful for it, and did not pay good interest on the investment. Grass, I am satisfied, is the remunerative crop for most New England farms; still on corn and potatoe grounds, I have found muck to operate with beneficial effect. With such a resource for manure, what eastern farmer need fear competition from his western neighbors, two days journey, or a thousand miles off? BERKSHIRE.

Potatoes from Seed.

EDS. CULTIVATOR—The following brief of some experiments, with my seedling potatoes last season, is respectfully submitted for the Cultivator.

All the different varieties, though the season was much too dry for good crops, came off in the advance of former years.

I planted as late as the 19th of June, on a patch of new land, just cleared from the stump, about 7 bushels of the very smallest of several varieties of my improved seedlings. They were the remnants from what I had selected and sold at home and abroad for planting. "Too small to offer *for sale* as *potatoes*." A large portion in size less than Robin's eggs. The soil was too green and rooty for the plow; it was broken with the grub hoe; a sandy loam, not at all manured; the crop suffered much by the drouth, was hoed once, and lifted, after the frost had killed the foliage when in vigorous growth, and the product was good. A good portion of the crop range in size with large potatoes. The "Buffalo *Pinks*," "*Russels*" and "*Eries*," were finely developed. Others also were good. The surface of the plat was too much interrupted with stumps and roots to allow any just estimate per acre.

I planted a few "*Prussian Seedlings*," the product of seeds from the balls which I obtained direct from Germany. The tubers are of the finest specimens. Shall cultivate these Prussian Seedlings with the expectation of adding to my lists for public inspection another *most beautiful* standard seedling potato.

I sowed my improved seedling potato seed at different dates—1st, March 1st; 2nd, May 1st; 3d, May 19th. The 1st and 2nd sowing was in hot bed, both of which did well, though the crops, on account of the drouth and prevailing sickness, were limited. But the third sowing, the 19th of May, was in open bed like cabbage-seed, and transplanted. Also in drills, in the field, where the plants remained and were cultivated the same as common potatoes. The product, notwithstanding the severity of the drouth, was abundantly satisfactory. The young seedlings were *numerous*, developing new varieties, and several of fine appearance. Many of the tubers were as large as a hen's egg. Mr. Ackerman, a gardener near me, sowed of the same seed the 25th of May in open bed, transplanted in rich garden soil, and the product was equal to 200 bushels per acre. Six of the first sized tubers weighed 22¼ oz. Others are equally successful with the sown seed. Good improved seedling potato-seed is sure to vegetate, produces very hardy plants, and may be used to great advantage by sowing it in open bed or in drills in the field, for the purpose of new varieties and producing seed for the next season. N. S. SMITH. *Buffalo, Feb.*, 1850.

Experiment with Potatoes.

EDS. CULTIVATOR—The following is an experiment which I made last season in planting potatoes. The kind is called by some the "Merino," and by others the "Red Mercer." It is a large long red potato with sunken eyes and a great many of them. It is a good potato for the table at any time after reaching maturity, but it is the best in the spring. It yields well in all soils, but produces the best quality in a sandy loam. The soil on which the experiment was made, was a sandy loam, and had been in clover two years. Planted three feet apart side by side. The following is the product of eighty hills of each:

Kind.	Yield, lbs.	Yield, bush., lbs.	Yield per acre.
1 large,.....	345	5.45	348
1 small,.....	234½	3.54½	236
½ large slit lengthwise,....	287½	4.47½	290
1 large, cut in two,.....	309	5.09	312
1 large, seed end only,....	251	4.11	253
1 large, root end only,....	287½	4.38½	281

The produce of the small ones were small, and of the large ones large. You are at liberty to do as you please with the above. G. T. PEARSALL. *Owego, Jan.* 21, 1850.

Advice Wanted.

EDS. CULTIVATOR—My farm consists of about 220 acres, arable land, divided into seven lots, numbered 1, 2, 3, 4, 5, 6, 7. No. 1 is river bottom, sandy alluvial, medium quality; average yield, 30 to 35 bushels corn, 10 or 11 bushels wheat per acre. Nos. 2 and 3 are identically the same; 4 and 5 are upland, gently undulating, stiff red clay, and dry, quality inferior; average yield per acre, say 20 bushels corn, 8 bushels wheat; clover and all the grasses do pretty well on these five lots; gypsum has a good effect. Nos. 6 and 7 we may regard as one field. The northern half was once a good clay mould; but it has been *skinned*, and we have now the clay without the mould. It lies almost level—quality about equal to 4 and 5. The southern half is totally different from the northern half, and from any other lot yet described; and it is in regard to this particular, that I want information.

This ground lies perfectly level—is, in fact, what we here call second bottom; that is, a bench or flat of land lying from 5 to 10, sometimes 20 feet above the first or sandy alluvial bottom. Clay predominates in this soil, and is sometimes, (that is in different places,) blue, sometimes nearly white, then again yellow, but is mostly a gray. In it there is gravel and sand; the gravel is small at the surface and increases in size as you descend. This is the poorest part of my farm—indeed, in its present condition, it is not worth cultivating; it would not yield

more perhaps than 10 bushels corn per acre. It is rather wet, for the crawfish work over two-thirds of it. There is about forty acres of it. Can this land be made valuable? if so, how? I know thorough draining is the first step. What then? Lime costs us 40 cents per bushel, delivered, and we have a bad market for surplus produce. Under these circumstances, I think, I can hardly afford to use lime. Would lime have a good effect on such land, for there is very little vegetable matter for it to act upon? I would give it up to the bushes and brambles, but that would be a bad example—and besides, it is in the centre of my farm—and of course, an eye-sore, that I would willingly get rid of, even at some pecuniary sacrifice. I could, without much expense, turn a small stream upon about one-half of it. Would not that be advisable? If so, should I suffer it to overflow it constantly, or only some few weeks at a time, through the year? Would you drain before overflowing? Would animal manure benefit such land much? or would some other manure (leave out lime,) do better?—In short, what would you do for a soil so uninviting? Give me the *modus operandi*. *Blaze* out a track, and I will try to follow it, no matter how *crooked*.

While speaking of this part of my farm, I will mention that there are several low, marshy strips, passing through it, at the depth of 2½ feet from the surface. These strips continue soft and miry. What materials suit best for draining such a place? I have tried stones; but they sink with the superincumbent weight and choke up. How would you underdrain such land? As to the general improvement of my farm, I have adopted the following rotation of crops:

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.
1 yr	Corn,	——	——	Corn	——	——	——
2 yr	Pasture	Corn	——	Oats with Clover	Corn	——	——
3 yr	Wheat	Past're	Corn	Clover	Oats and Clover	Corn	——
4 yr	Corn	Wheat	Past're	Wheat	Clover	Oats and Clover	Corn
5 yr	Pasture	Corn	Wheat	Corn	Wheat	Clover	Oats and Clover

In this way I give more rest to 4, 5, 6 and 7, than 1, 2, 3, for the reason that the three last mentioned are much more productive, and improve as much with one year's rest as the others with two. Necessity compels me to cultivate in corn one of the river lots and one of the upland. Under this necessity, can I adopt a better rotation? If so, point it out. Rapid improvement of the soil is my object, without regard to profit. My means of making manure are abundant—hundreds of acres of woodland, plenty of swamp mud, straw, weeds, corn-stalks, &c., &c., with about 70 head of cattle, same number of swine, 12 or 14 head of horses; and besides have Bommer's method of making manure. Apropos: What is the common opinion with you in regard to that method? Could I profitably use it? Another question. Where thin upland (clay) is to remain in clover but two years to be turned under for wheat, would you recommend any mowing or pasturing the second season? Would it be better to let it alone and turn the whole summer crop under? Recollect, benefit to the soil is more my object than large crops. Ed. W. Jones. *Clover Hill, N. C., Jan.* 22, 1850.

Drive thy business or it will drive thee.

White Sugar Manufactory.

Eds. Culvivator—During the past season we have, by availing ourselves of suitable machinery and apparatus, been able to make our entire crop of cane into white sugar, direct from the cane juice; and with about the same facility as in the ordinary way of boiling in open kettles.

The mode we have adopted is similar to that adopted in all refineries—by filtrations and concentration in vacuum—principally by the Deronne system. The machinery was constructed by the Novelty Works, New-York.

We have made some in loaf, which has been pronounced very fine; and feel assured, when the mode becomes generally adopted, that white sugar may be obtained twenty-five per cent less than at present, saving thereby to the consumers, a vast amount, and to the producers and merchants, the heavy drainage of brown sugars—the drainage being an entire loss.

Mr. Melsen's process has been tried here, but anticipations have not been realized. S. Tillotson. *New River, La., Jan.* 3, 1850.

Preparing and Sowing Clover or Timothy Seed.

Eds. Cultivator—Take one bushel of clover seed, put it in a pile on your barn floor. Make 3 gallons of pickle, not quite strong enough to bear an egg, put it on the seed, mix it thoroughly, in the evening with a paddle or shovel, and then spread it on the floor, 4 inches thick. The next morning, wet it again as above; then mix about one peck of plaster, by sprinkling 2 quarts upon it at a time, well stirred; spread out your heap again, and so on, till you have it so well dried with plaster that the seed will not stick together. Sow while the seed is damp. One bushel thus prepared will make over one and a half bushels.

The advantage of sowing in this way is, you save at least one-third your seed, and are almost certain of its growing. In the spring and summer of 1849, I sowed in four different pieces, 42 acres in the above way, 6 quarts to the acre, not one acre of which "missed." I sowed nine acres in the "old way," viz. the clean dry seed; 6 qts. to the acre. On the whole field there *may be* 2 acres of clover, not more. I also sowed 9 bushels of plaster on this field; not any on the other.

An experienced gentleman told me of this way, and that he had seldom if ever missed having plenty of clover, and thick enough too. B. M. Ellis. *Muncy, Pa., Jan.* 23, 1850.

Timber for Plank Roads.

We notice by some papers that serious apprehension is felt that the vast amount of timber used for plank road, is likely to render all kinds of wood and lumber scarce throughout the county. Let us give one moment's thought to this objection.

Suppose that every township in the country has its plank road—a result which, independently of the wood consumed, would add immensely to the value of land and prosperity of the whole country. This would be a road for say every five miles, or one mile of road for every five square miles. A good single track, (and few roads need more,) requires about 160,000 feet of lumber; a thousand feet are about equal to a cord of wood in weight; consequently a quantity equal to 160 cords is needed for every five square miles. The average durability, including the stringers, is about 8 years; or equal to the consumption of 20,000 feet of lumber,

or 20 cords of wood per year for the five square miles, or 4 cords for each square mile.

Now, in the thickly settled farming districts, not counting cities and villages, there are about 80 persons per square mile, or ten families averaging 8 persons each. These families consume on an average at least 20 cords of fuel each yearly, (many consume 40 or 50,) or 200 cords per square mile. This is just 50 times as much as is required for the yearly use of the plank road.

Again, nine-tenths of the fences in most parts of New-York are made of common stakes and rails; 48 of these are equal to a cord of wood, and will build 3 rods of substantial fence. It requires to fence one square mile into ten-acre lots, sixteen miles of fence. Throwing off six-tenths for waste and woodland, &c., and leaving ten miles, there are required for these ten miles no less than one thousand cords of wood in rails to fence each square mile; and if these last 12 years on an average, there are required yearly more than 80 cords for each square mile, or 20 times as much as for the plank road.

A village of 1500 persons, consumes in each year about enough wood to build ten miles of plank road; and the yearly consumption of wood in such a place as Rochester, Syracuse, or Utica, would run a half-dozen roads in different directions into the country, each from ten to thirty miles long, estimating merely the quantity of wood required.

Water-tight Cellars.

I notice in the last number of *The Cultivator*, the description of a mode of excluding water from cellars, by ramming in a space with clay between the wall and the earth, eight to twelve inches thick. Allow me to suggest another and cheaper mode. Plaster the whole inside, bottom and all, with two or three successive layers of water lime cement, making the cellar as tight as a water lime cistern. The water cannot get in at sides or bottom; and if two or three inches thick, and mixed with pebbles at the bottom; no rat, however ingenious, can pass it, after well hardened; and it makes a beautiful floor for the cellar. X.

Preparation for Spring Wheat.

Mr. Q. C. RICH, Chairman of the Committee on Field Crops for the Addison County (Vt.) Agricultural Society, makes the following remarks in reference to the cultivation of wheat:

"Wheat and Corn, we think, will be admitted to be the two most important grains grown in this county. Winter and Spring wheat has paid a fair profit for the outlay the past season, particularly winter, which has not been better in twenty years. The best preparation is a clover lay, but in case you have none, we would recommend plowing your land early in June, and sowing from one to two and a half bushels of Buckwheat per acre, to be turned under the last of August or first of September. The rapid decomposition of the vegetable matter warms the soil and makes it more friable—causes the wheat to vegetate, grow, and get a stronger growth—the roots to strike deeper than they would had you applied manure, or summer fallowed, as was the usual practice. The Black Sea (a spring variety,) is the only kind sown to any extent at this time. When it was first introduced into the county three-fourths to one bushel was considered sufficient to seed an acre; but now many are using two bushels; one and a half is believed to be preferable."

Durability of Underdrains.

A correspondent of the *New England Farmer* says that in walking over the grounds of the Duke of Portland, in the west of Scotland, he was led to examine the condition of a *brush drain*, constructed 32 years previously. The wood of the brush was found to be in an undecayed condition, and the drain acted as efficiently as newly constructly tile drains around it. This appears the more probable, when it is remembered that the brush is almost perfectly excluded from the external air, and most so on clayey ground. The string-pieces of plank roads, covered only by the plank, from the air above, are found to last 15 or 20 years. There is doubtless a great difference in different kinds of wood used as brush drain. Red cedar branches, buried in drains in clayey ground, would probably last beyond a lifetime. The writer has seen wood dug up in excavating deep wells 30 or 40 feet deep, which appeared to be cedar, perfectly sound, and where it must have been deposited at the time of the great deluge.

The correspondent above referred to, says that "it is well known that so far as permanence is concerned, tiles do not, on an average, last more than 20 years." The best ones *now* constructed, will however, doubtless last much longer, when not in decidedly unfavorable localities.

GUANO IN AGRICULTURE.—The opinion is gaining ground that guano is most advantageously applied to wheat—the coarser nature of yard manure being more appropriate for corn. It is either plowed in, or perhaps better applied in autumn; 200 or 300 lbs. being usually enough for an acre. According to T. S. Pleasants, in the *Am. Farmer*, the wheat and corn crops of the members of the Farmers' Club of Sandy Spring, Maryland, where it has been much used for the past five years, have averaged as follows:

1844.—Wheat	10	bushels	per acre
Corn	24	"	"
1845.—Wheat	14	"	"
Corn	20	"	" (season unfav.)
1846.—Wheat	11½	"	" (season unfav.)
Corn	21	"	"
1847.—Wheat	15	"	"
Corn	23	"	"
1848.—Wheat	18	"	"
Corn	31	"	"

INSURANCE OF LIVE STOCK.—Col. J. M. SHERWOOD, of Auburn, suggests, through the *Evening Journal*, the formation of a company for the insurance of live-stock. He observes—"There is in this and the adjoining States, a large number of valuable breeding animals, horses, cattle and sheep. These are all liable to injury and disease, which occasions serious loss to the owners. The liability to losses frequently prevents persons from importing and introducing valuable breeding stock into the country. In order to obviate in some measure these objections, I propose that there be formed a New-York State Live Stock Mutual (or Stock) Insurance Company, and that persons willing to join in such a company give notice thereof to the Secretary of the New York State Agricultural Society before the first of March next. When, if a sufficient number of persons (or a sufficient amount of capital, if a stock company,) are found willing to join in such company, measures may be taken to organize one."

Such companies have long existed in England, where their utility has been very great, and we think they would prove equally beneficial in this country.

Answers to Correspondents.

To prevent seed corn from being pulled up by birds or squirrels.—A. L., Apalachin, N. Y. Various preparations have been recommended for this purpose; such as soaking the seed in copperas-water, coating it with flour-sulphur, coating it with tar, &c. So far as we are acquainted, we believe the tar is most effectual; but its direct application to the grain, is liable to injure it; and to obviate this, some have adopted the practice of first coating it with plaster (gypsum,) and then coating it with tar. This, it is said, does not obstruct the germination of the corn; and the birds or squirrels will not pull it after they have found what it is. It is necessary that the corn should be well soaked in water before it is coated, otherwise the tar will not allow the penetration of sufficient moisture to produce germination.

Coal Tar.—F. E. S., Braceville, Ohio. Coal tar is usually applied with a common white-wash brush. It is used as a paint for fences and outbuildings, and is considered a cheap mode of preserving them from decay. It also answers a good purpose for protecting iron against oxydation or rust.

Destruction of Rats.—J. T. S., Bearmont, Pa. Arsenic is a deadly poison to rats, but can only be used where other animals cannot come to it. Compositions of phosphorus with ground glass, have been recommended. Cork cut in thin slices, and fried in lard, it is said will kill them. Dr. J. V. C. Smith of Boston, states that ground plaster, mixed with dry meal will be eaten by rats, and that it will *set* in the stomach and kill them. Professional rat-catchers use substances to decoy the vermin into traps, or to places where they can be killed. The following is a composition used for this purpose:

Powdered assafœtida, ¼ grain.
Essential oil rhodium, 3 drachms.
" lavender, 1 scruple.
Oil of annisseed, 1 drachm.

See *Cultivator* for 1846, p. 371, and 1848, p. 225.

Moles.—S. M. T., Glen Cove, N. Y. There are various traps for catching moles. A cut of a good one was given in *The Cultivator*, vol. 10, (old series,) p. 70. They are also destroyed by poison. Pills of bread, containing arsenic are laid in their tracks; small shreds of meat on which arsenic has been sprinkled, are used for the same purpose. It is said that the castor-oil bean, laid in their tracks will drive them away.

Harvesting Machines.—E. S., Forty Fort, Pa. The most popular harvesting machines have heretofore been Hussey's and McCormick's. The address of the former is O. Hussey, Baltimore, Md.; of the latter C. H. McCormick & Co., Chicago. H. L. Emery, Albany, is agent for McC. & Co., and will have the machines for sale next season. Mr. J. R. Burrall, of Geneva, N. Y., manufactures a harvesting machine, which, we understand, is favorably spoken of by those who have used it.

Maple Sugar.—A. O. B., Claridon, O. In Vermont, tin is considered preferable to iron for boiling syrup. You will find the directions you ask for for in our vol. for 1849, pp. 123, 262, and in that for 1847, pp. 24, 25.

Books.—J. R., Utica. There are only three vols. of the "Memoirs of the Board of Agriculture." Of the "Memoirs of the Philadelphia Ag. Society," we have five volumes, which we believe comprise the entire series. We presume it will be a difficult matter to procure any of these vols.

Bones.—J. H. M., Columbia, Pa. If you have no bone mills in your vicinity, we do not know how you will be able to work them to advantage. The labor of crushing them by hand is considerable, and the bones may not be worth the cost. To dissolve bones in sulphuric acid, they are usually first broken in a mill, and then covered or saturated with the acid. Prof. Norton says, "Twelve lbs. of acid per bushel seems a good quantity to apply; but it must in all cases be previously diluted with once or twice its bulk of water. An excellent way of applying it, is to place the bones in a conical heap on a bed of ashes, and slowly pour on the diluted acid. They will absorb nearly the whole; the outside bones should then be turned inside, and the whole will in a short time become soft and fit to mix with ashes for drilling or sowing."

Old tan bark.—If wood ashes can be cheaply obtained, the best way to convert tan into manure, is to mix it, in layers—say, a bushel of ashes, unleached, to ten of tan—the heap to be made up in spring, worked over in midsummer and used the next season.

Black-Sea Wheat.—J. W., Bucks county, Pa. Mr. Emery, of the Albany Agricultural Warehouse, advertises this kind of grain.

Hand-drill, or Seed-sower.—C. T., Kingsville, O. Emery's seed-planter will plant all kinds of seeds, from turnep seed to Indian corn. It is the kind generally used here for carrots. The price is $14.

Peas and Beans.—C. W. T., Trevose, Pa. Peas are much cultivated in the Canadas, in the northern portion of New-York, and in Vermont, New-Hampshire, Maine, &c. They grow better in those northern regions than farther south, and are also comparatively free from bugs. Indian corn is less grown at the north than in the middle and southern states, and peas are used to some extent as a substitute for that grain. They are considered quite as valuable per bushel, for feeding sheep, hogs, or horses, as corn. They yield from twenty to forty bushels per acre. The English field bean is not much cultivated in this country, and we are unable to refer to any particular trials which have been made with it here. The beans usually cultivated here, are more valuable to sell as human food, than for feeding stock—though for such animals as will eat them, either whole or ground, they are considered equal to corn. A good yield is twenty-five bushels per acre.

Officers of Agricultural Societies for 1850.—Bennington county, Vt.—John S. Pettibone, President; Aaron Hubbell, Joseph Parker, Vice Presidents; Harmon Canfield, Secretary; Zadock Canfield, Treasurer.

Oswego County, N. Y.—Hamilton Murry, President; C. A. Tanner, Peter Devendorf, Vice Presidents; James H. Wright, Secretary; J. S. Chandler, Corresponding Secretary; Samuel Allen, Andrew Place, A. W. Severence, Executive Committee.

Wayne County, N. Y.—Joseph Watson, President; S. E. Hudson, G. Center, N. Warner, J. Jenner, J. Borrodale, E. Flint, A. Hale, Vice Presidents; D. Kenyon, Recording Secretary; R. G. Pardee, Palmyra, Cor. Secretary; J. D. Ford, Treasurer; A. G. Parry, W. P. Nottingham, B. H. Streeter, E. N. Thomas, H. G. Dickerson, Wm. Rogers, V. G. Barny, Executive Committee.

Notices of Publications.

THE COUNTRY GENTLEMAN—*a Cottage, Villa, Farm and Garden Newspaper.*—This is the title of a new weekly newspaper commenced in London, the first of the present year, under the auspices of GEORGE GLENNY, F. H. S., a well known and popular writer on gardening matters, by whom the Horticultural Department is conducted. We are much pleased with the first No., the only one which has as yet come to hand; and cheerfully commend it to such of our readers, whether of foreign or native birth, as wish to receive regularly a weekly newspaper from London, in which they will find, beside a journal of the news of the week, a record of the progress of the arts of culture in the garden, the orchard, and the conservatory, and on the farm. Price 6d sterling per No., equivalent to about $6.50 per year, to which is to be added, to the American subscriber, the ocean postage, which would make the cost here $8 to $9 a year. (See advertisement.)

PROCEEDINGS OF THE SENECA COUNTY AGRICULTURAL SOCIETY.—We are indebted to JOHN DELAFIELD, Esq., for a copy of these proceedings. They comprise about 100 pages in quarto form, handsomely printed and bound, and embrace a general record of the doings of the Society for 1849.—Statistical tables are given of the agricultural products of each town in the county for the year 1848. There are, also, several valuable addresses and essays, from some of which we have already given extracts in our columns.

NEW WORK ON DISEASES OF ANIMALS.—We understand that Dr. G. H. DADD, of Boston, proposes to publish, within a few months, a work to be entitled—"Outlines of Anatomy and Physiology; also, a General History of the Rise and Progress of the Veterinary Science in England, with practical observations on Feeding, Watering, Grooming, Shoeing, &c., &c.; written with a view of teaching every man how to prevent disease in animals; with plates; containing also, a Compendious Dictionary of the Veterinary Art."

AMERICAN POULTRY YARD.—A work consisting of upwards of 300 pages relating to the origin, history, and description of domestic poultry of all kinds, with directions for breeding, &c., with numerous illustrations; by D. J. Browne; with an appendix on the comparative merits of different breeds of fowls, with much statistical information on the subject, by Samuel Allen. The work is from the press of C. M. Saxton, New-York. Price one dollar.

AMERICAN FOWL-BREEDER.—This is a manual lately published at Boston, comprising information in regard to breeding and managing poultry, their diseases, &c.—with engravings—by an "Association of Practical Breeders." It is offered at 25 cents per copy, and will be found useful to those who keep poultry.

THE FAMILY VISITOR.—We have received the first number of a paper with this title, published at Cleveland, Ohio, by Dr. J. P. KIRTLAND, S. ST. JOHN, and O. H. KNAPP, editors and proprietors.—The design of the publication is to furnish such information as shall tend to interest and improve the mind—or as expressed by the publishers—"a family paper, designed to instruct, enlighten, and interest the family circle." Articles will be furnished on various branches of natural science, embracing zoology, geology, chemistry, &c., accompanied by illustrations. Agriculture and horticulture will also receive attention, and information will be furnished on all subjects touching the philanthropic, political and general improvements of the day.—The "Visitor" is issued weekly, at $1.50 per year in advance. The paper is handsomely got up, in the quarto form, and from the high standing of the editors, we presume it will deserve and receive a liberal patronage.

MOORE'S RURAL NEW-YORKER.—This is the title of a paper, dating from the commencement of the year, published at Rochester, N. Y., by D. D. T. MOORE, late publisher and associate editor of the *Genesee Farmer*. The *New-Yorker* is to be devoted to agriculture, horticulture, mechanic arts, science, literature, education, rural and domestic economy, reports of the crops and markets, and general intelligence. Conducted by D. D. T. MOORE; L. B. LANGWORTHY, associate editor; ELON COMSTOCK, T. C. PETERS, corresponding editors; L. WETHERELL, editor of the educational department. The paper makes an excellent appearance in all respects, and we have no doubt will well fulfil its design.—Each number comprises eight pages, large quarto. It is published weekly, at two dollars a year.

AMERICAN JOURNAL OF SCIENCE AND ARTS.—The January number of this excellent work contains valuable articles on various scientific subjects, from the pens of Profs. Loomis, Dewey, J. D. Dana, Dr. Wyman, Dr. Darlington, S. S. Haldeman, John A. Porter, T. S. Hunt, and others. The work is published at New Haven, Ct., and is conducted by Messrs. SILLIMAN & DANA. Published every second month—$5 per year.

GENESEE FARMER.—Mr. D. D. T. MOORE has relinquished his interest in this paper to Dr. DANIEL LEE, who has for several years been associated in the editorial department of the paper. Dr. L. continues its publication, and it is edited by him in connection with JAMES VICK, Jr. We have received the January number, which indicates that the good character of the work will be preserved.

PATENT PORTABLE RAILROAD HORSE POWER, AND OVERSHOT TRESHING MACHINE AND SEPARATOR.—The *Prairie Farmer* states that this machine has been extensively introduced into Illinois, Iowa and Wisconsin, during the past season, and that the result has been a general conviction of its superiority over any sweep machine known there. The editor says—"We have it from several persons using them, that with one of these implements, two horses and four or five men have done as much work, day by day, as threshers with eight horses and ten men operating along side of them. One man informs us, that he threshed one hundred and sixty bushels in a day, of wheat yielding only eight bushels per acre. This we call large threshing. Another informs us that his wheat yielded from seven to nine bushels per acre, with straw enough to produce in common seasons twenty or twenty-five bushels. With the same span of horses working every day, and his machine elevated sixteen inches, his ordinary threshing was eighty bushels per day. Others in the same circumstances, by hard driving, or changing horses, have threshed from one hundred to one hundred and fifty, and in one case, as we have said, one hundred and sixty."

For further particulars, see p. 95, current vol.

ACRE IN YARDS.—An acre contains 4840 square yards, or 70 yards in length and 69 1-7 in breadth—or 198 feet by 220.

Notes for the Month.

COMMUNICATIONS have been received since our last, from Prof. J. P. Norton, F. Holbrook, G. T. Pearsall, H., Daniel C. Douglass, J. C. H., Darwin E. Gardner, S. R. G., N. S. Smith, W. L. Eaton, Harry Betts, A New-York Farmer in Virginia, J. R., Otis Dillingham, E. Croasdale, C. G. J., W., J. S. Pettibone, A Farmer, Berkshire, Eliza P. Benedict, A. B., A Subscriber.

BOOKS, PAMPHLETS, &c., have been received as follows:

Transactions of the Essex (Mass.) Ag. Society, for 1849, from J. W. PROCTOR, Esq., President of the Society, and from Gen. WM. SUTTON.

Transactions of the Worcester (Mass.) Ag. Society for 1849, from JOHN W. LINCOLN, Esq.

Annual Message of the Governor of Ohio, from Hon. J. S. COPELAND.

Proceedings of the North American Pomological Convention, held at Syracuse, 14th Sept., 1849.

The Application of Science to Farming, an address before the Hampden Ag. Society, Oct. 4, 1849, by W. C. GOLDTHWAIT.

An Address before the Hampshire, Franklin and Hampden Ag. Society, Oct. 1849, by Prof. JOHN P. NORTON.

Transactions of the Norfolk, (Mass.) Ag. Society, for 1849, the first year of its existence—a handsome octavo of 150 pages—from Hon. M. P. WILDER, President of the Society.

The North British Agriculturist, several nos. from Mr. J. JOHNSTON, Geneva.

Sixteenth Annual Report of the Massachusetts Lunatic Hospital, from the Superintendent, Dr. GEO. CHANDLER.

☞ Will "H. C. W., Putnam Valley," please favor us with his address?

APPLES OF 1846.—Mr. JAMES STEWART, of Hobart, Delaware county, N. Y., has sent us four apples, two of which grew in 1846, one in 1848, and one in 1849. They are all the product of one tree, a seedling, on the farm of Mr. S. They are remarkable from their property of long keeping; but we do not discover that they have any other qualities that would particularly recommend them.

FAT SHEEP.—Mr. B. MCNEIL, of Schoharie, lately brought to this city, on his way to Boston, forty-two fat sheep. They were purchased at $15 a head of GEORGE GOODYEAR, of Schoharie, who fattened them. They are mostly of the improved Cotswold breed, and that breed crossed with the Bakewell or Leicester. Several of them weighed, alive, 300 lbs., and upwards each. Twenty-five of the lot were raised by Mr. GEORGE CLARK, of Springfield, Otsego county, and the others were raised in the same neighborhood. They were the finest lot of fat sheep we ever saw, of so great a number.

GRAFTING GRAPEVINES.—Mr. CURTIS, member of Assembly from Onondaga county, stated at one of the agricultural meetings in Albany, that he had been very successful in grafting the Isabella on the common wild grape. He takes about fifteen to eighteen inches of the root of the wild vine, and inserts in it a scion of the kind he wishes to propagate. It is done in the ordinary mode of cleft or "split" grafting. The vine is planted so that the connexion of the stock and scion will be just below the surface of the ground. The operation is performed in the spring before the vines come into leaf. Mr. C. stated that he had vines so grafted, which bore considerably the first year, and sometimes they had made a growth of fourteen feet the first season.

GOOD CORN CROP.—J. W. COLBURN, of Springfield, Vt., writes—"I have raised the past season, on four acres of ground, (Connecticut river alluvial,) within a few quarts of 416 bushels. It is of the variety known as the Brown corn; eight-rowed, small cob, deep flat grain, having a chocolate colored tinge. In a rich soil, well prepared, and with clean and thorough cultivation, it will yield more than any kind I have ever tried; but on light and poor soils, and with ordinary culture, it will do nothing."

CHEESE DAIRIES IN WASHINGTON COUNTY, N. Y.—A correspondent in Middle Granville, informs us that from 150 to 200 tons of cheese were made in that town the past season. We publish this month, an account of the products and management of one of these dairies, and are promised farther particulars hereafter.

SAMPLE OF WHEAT.—We have received from Mr. S. B. PARSONS, of Colebrook, N. H., a sample of wheat, called "the Turkey wheat." Its appearance is similar to that of the "Black Sea" wheat, when that variety first came into the country. The name also, implies that they are from the same region. But as the sample sent us is understood to be the product of a later importation, it may possess some valuable qualities which the other has lost in acclimation. Mr. P. informs us that it has succeeded remarkably well, having ripened perfectly free from rust, in neighborhoods where other wheat totally failed.

SAMPLES OF WOOL FROM KENTUCKY.—We have received from Mr. WASHINGTON MILLER, of Winchester, Clarke Co., Ky., some handsome samples of Merino wool. We are informed that they are in part from sheep purchased by him, about fifteen years since, of LEWIS SANDERS, Esq., of Grass Hills, Ky., and in part from sheep lately purchased from the eastern part of Ohio. The samples are all good, and those from Mr. M.'s own flock, show that there is no obstacle to the production of fine wool in Kentucky.

LAWRENCE SCIENTIFIC SCHOOL.—By a circular, we learn that the course of instruction in this department of Harvard University commencing March 1, 1850, is to comprise the following lectures: 1, Engineering, by Prof. Eustis; 2, Chemistry, by Prof. Horsford; 3, Zoology and Geology, by Prof. Agassiz; 4, Anatomy and Physiology; 5, Botany and Vegetable Physiology, by Prof. Gray; 6, Experimental Philosophy, by Prof. Lovering; 7, Mathematics, by Prof. Pierce; 8, Astronomy, by Messrs. W. C. and G. P. Bond. For particulars in regard to this valuable school, inquire of Prof. E. N. Horsford, Dean of the Faculty, Cambridge, Massachusetts.

AGRICULTURAL ENTERPRISE IN CANADA.—A Canadian paper notices the improvements in agriculture made by CHAS. P. TREADWELL, Sheriff of the Ottawa District. It is stated that he has upwards of two hundred acres of land ready for spring wheat, and that he cleared upwards of a hundred acres of forest last season. His extensive operations in draining are also spoken of; he having made upwards of five miles of ditches with the spade, besides other ditches made by a plow designed for the purpose, drawn by four horses. He has also introduced the subsoil plow.

THE LAST SMITHFIELD SHOW OF FAT CATTLE.—This exhibition was held at London from the 11th to the 14th of December last. In the six classes of oxen and steers, there were fourteen prizes; of which the Herefords took four, viz: one first prize, including the silver medal to the breeder, and the gold medal for the "best ox or steer in the show-yard"—one second, and two third prizes; the Short-Horns took four—two first and two second prizes; the Devons took five—two first, two second

prizes, and one third prize; the West Highlanders one. In the three classes for fat cows and heifers, there were seven prizes; of which the Short-Horns took six, including all the first prizes, and the gold and silver medals for cows and heifers; the Devons one—a second prize.

COCHIN CHINA FOWLS.—Within a few years, much has been said in regard to fowls under this name, specimens of which, having been presented to her Majesty, Queen Victoria, were kept at the royal residence, Windsor Castle. Mr. GEORGE P. BURNHAM, editor of the *American Union*, Boston, states that he has received from Mr. J. J. NOLAN, of Dublin, some of this stock. From descriptions we have seen of these fowls for the last six years, we have never supposed that they differed essentially from other large Asiatic fowls, common in this country, under other names. This impression agrees with Mr. Burnham's description of his imported fowls, which, though not "exactly," he says, like some we have in this country, are still "very similar, as regards the general characteristics." Again, he says, "they bear a resemblance to the best Shanghaes we have here, with the exception of the tail," that of the Cochin Chinas being longest. We should like to know at *what* "English Agricultural Fair, this [Mr. B.'s] stock took the premium, at the side of her Majesty Queen Victoria's *original* Cochin Chinas?"

☞ Attention is invited to the advertisement of Mr. HOWLAND, in this number. We have not seen the horse he offers for sale, but those who have represent him to be a valuable animal.

CORRECTION.—In our report of the premiums awarded by the N. Y. State Agricultural Society on grain crops, in our last, Mr. Crispell's crop of oats was stated 80 bushels per acre; but it should have been 85 bus. 20 qts. per acre.

GLASS WATER PIPE.—A specimen of this pipe has been left at our office by W. T. DE GOLYER.—We learn that over fifty rods of the pipe were laid for Union College, Schenectady, in 1848, which is still in use, and has been found free from every defect. It is not in the least corroded, and affords the water as pure as at the fountain. Further particulars in regard to the article may be learned by addressing D. O. KETCHUM, Agent Albany Glass-Works, Albany.

MILK-HOUSE FOR MAKING BUTTER.—We have received several inquiries for plans of houses or apartments for setting milk for making butter, and shall be greatly obliged if our friends will give us their views in regard to the subject. We should like to learn from those who have had experience in making butter both with spring houses and without, what they deem the best plan. What do the celebrated butter-makers of Pennsylvania say?

LANDS IN WISCONSIN.—A subscriber, who with others, is desirous of emigrating to Wisconsin, wishes to obtain information as to the best section of the state for farming, and the usual course of farming there, commencing with the prairie land in its natural state. Will some of our Wisconsin friends give us an article on this subject?

Garden Tools and Pruning Implements.

A GREAT variety of these, of American and Foreign manufacture, constantly on hand. A. B. ALLEN & CO.,
March 1, 1850. 189 & 191 Water St., New-York.

Colman's European Agriculture.

EUROPEAN AGRICULTURE, from personal observation, by HENRY COLMAN of Massachusetts. Two large octavo vols.—price, neatly bound, the same as published in Nos., $5. For sale at the office of THE CULTIVATOR.

Prices of Agricultural Products.

New-York, Feb. 18, 1850.

FLOUR—Genesee, per bbl., $5.50a$5.62—Michigan, $5.12½a$5.27.

GRAIN—Wheat, prime Genesee per bush., $1.28—Ohio, $1.10a$1.12½. Corn, fine white Southern, 62½c.—Southern and Jersey yellow, 60c. Rye, 62½c. Barley, (prime) 70c —Oats, 42a45c.

BUTTER—best, per lb., 18a20c.—Western dairy, 12a15c.

CHEESE—per lb., 6a8c.

BEEF—Mess, per bbl., $10—Prime, $6.50.

PORK—Mess, (new) per bbl., $10.50a$10.62½—Prime, $9.

LARD—per lb., (tierces,) 6½c.—(kegs, prime,) 7c.

HAMS—per lb., Smoked, 8a9c.

HOPS—first sort, per lb., 14a16c.

COTTON—Upland and Florida, per lb., 12a14c.—New Orleans and Alabama, 12a14½c.

WOOL—(Boston Prices.)

Prime or Saxon fleeces, per lb.,	40a45c.
American full blood Merino,	36a40
do half do	33a35
do one-fourth do, and common,	26a27

BRIGHTON CATTLE MARKET.

Thursday, Feb. 14.

At market, 850 Cattle. 100 unsold. Prices have declined still further. Less than last week, by 12½a25 cents. A very few at $6.25, by *agreement*. Discount upon the weight alive 35 per cent., which would probably reduce the price to $6. We quote $6 for a small portion of the whole number. Good, from $5a$5.75. Fair $4.50a$5. Inferior, $3.50a$4. Working cattle low and dull. Cows and Calves plenty, and not much demand. All sorts of store cattle dull.

SHEEP, 2050 at market. 1200 Stall fed sheep, prices, $3.00, $3.25, $3.50, $4.00, $4.50, $5.00, $6.00, $6.50. 850 Common sheep, $2.00, $2.25, $2.50, $2.75. 400 remain unsold.

SWINE. 800 at Market. But little activity—many unsold. Prices lower than last week. A few sales at 3½ *a* 4½. At retail, 4½a5½. *Plowman.*

American Field and Garden Seeds.

A LARGE and varied assortment, fresh and warranted. The above seeds are grown expressly for us, and we have every reason to believe them genuine, and of the best and most improved kinds in market. For sale at the Agricultural Warehouse of
A. B. ALLEN & CO.,
March 1, 1850. 189 & 191 Water Street, New-York.

Bird Seeds.

CANARY, Hemp and Millet Seed, for sale at the Agricultural Warehouse of A. B. ALLEN & CO.,
189 & 191 Water St., New-York.

Fertilizers.

PERUVIAN and Patagonian Guano, Bonedust, Plaster of Paris, Poudrette, and Combined Manure, a new and excellent article. Enquire at the Agricultural Warehouse of
A. B. ALLEN & CO.,
March 1, 1850. 189 & 191 Water St., New-York.

Choice Seedling Potatoes.

BUFFALO Seedling Pink eye. Rather long, marble white, eyes bright pink. Productive, healthy and excellent for the table.

"*Erie Seedling.*" Long, intershaded with pink, purple and green; productive, hardy, and fine for the table.

"*Seedling Russet.*" Round, smooth, color cinnamon; hardy, early, productive, and agreeably flavored, and fine for the table.

My "*Early Junes*" are large, round, smooth, light orange white; on the whole, the best early potato for early marketing I have yet found.

Also, superior renovated *Seedling Potato Seed*, gathered from the most select varieties, combined with choice specimens late from Europe and South America.

Carefully packed and delivered at the depot, $2 per bushel, $4 per barrel. Seeds per packet, sufficient for 10 bushels seedlings, transmitted by mail at double postage, $1 per packet. N. S. SMITH.
Buffalo, February, 1850.

Poudrette.

THE LODI MANUFACTURING CO., offer their new and improved Poudrette, for sale at their usual rates:—1 bbl. $2—3 bbls. $5, and $1.50 per bbl. for any quantity over 7 bbls., delivered free of expense on board of vessel in New York. At the Factory, where vessels drawing 8 feet water can come, it will be sold at 25 cents per bushel.

The expense per acre in manuring corn with Poudrette, will amount to about $4, calculating 25 cents per bbl. freight, and all the necessary labor included. On land previously manured, or on good sward land, one gill to the hill is sufficient—on poor ground, a good crop can be raised by one gill at planting, and one at the last hoeing. The cost of the labor alone in manuring corn in the hill with barn yard manure, will amount to more than the first cost of the Poudrette, with freight and all charges added; and the effects of Poudrette are quicker, more vigorous, and the corn reaches maturity earlier. A fair trial, *however small*, is respectfully solicited.

A pamphlet containing instructions for use, certificates from some of the first Agriculturists in the United States, and much valuable information will be sent *gratis*, to any one applying (*post paid* if by letter,) to "THE LODI MANUFACTURING COMPANY, 66 Dey street, New-York." Feb. 1—4ms.

Highland Nurseries, Newburgh, N. Y.

A. SAUL & CO., being about to clear off the entire stock of one of their nurseries, adjacent to the residence of Mr. A J. Downing, they would call especial attention of Nurserymen, or persons about to commence the business, to the stock of trees thereon. They consist principally of Pears, including all the leading and standard varieties, from 2 to 4 feet high. Also, a lot of Plum and Cherry Trees, and some Ornamental Trees; many of which are good saleable trees. All of which will be sold at such reduced rates, as to make it cheap stock for young nurserymen to plant out.

March 1—2t.

Poultry Books.

THE American Poulterer's Companion, by C. N. BEMENT—price $1.

The American Poultry Yard, by D. J. BROWNE and SAMUEL ALLEN—price $1.

The American Fowl Breeder, by an Association of Practical Breeders—price 25 cents.

For sale at the office of THE CULTIVATOR.

Ellwanger & Barry

WISH to say that the only travelling agents authorised to do business in their name, are ROBERT BLAIR, HIRAM BECKER and HENRY COLLINS. They feel compelled to make this announcement, from the fact that other persons in various parts of the country, are representing themselves as their agents.

Mount Hope Garden and Nurseries,
Rochester, N. Y., March, 1850.

Transactions of the N. Y. State Ag. Society.

TRANSACTIONS of the New-York State Agricultural Society, from 1841 to 1849, eight vols., price $8, for sale at the office of THE CULTIVATOR.

Agricultural Warehouse,

193 *Front Street, New-York.*

THE subscriber, manufacturer and dealer in *Agricultural Implements*, offers for sale one of the largest assortments to be found in the United States. Among which are the celebrated *Premium Plows*, which were awarded the highest premium of the *New-York State Fair* in 1847, and of the *American Institute* in 1846, 1848, and 1849. Also, the *Centre Draught, Eagle*, and all other *Plows* mostly in use. *Corn Shellers, Straw Cutters, Fanning Mills, Portable Grist Mills, Horse Powers, Threshing Machines, Seed Sowers, Wheelbarrows, &c.* All of which will be warranted to be of the best quality and sold at the lowest rates. JOHN MOORE,

March 1—3t. 193 Front Street.

A Rare Chance

THE subscriber offers for sale, or in exchange for serviceable horses or mares, his splendid bay Colt, of the "Surprise" stock. His interest in the Norman horse, makes it desirable to be free from this charge. The stallion offered, is nearly five years old, and from his size and muscular developments, promises finely. Some superior foals of his get, can be shown. Any communication may be addressed to ROBERT B. HOWLAND,

March 1—2t. Union Springs, Cayuga Co., N. Y.

Farm for Sale,

CONTAINING 200 acres of excellent land, situated in the town of Ballston, county of Saratoga, 2½ miles south of Ballston Springs, and near the residence of E. C. DELAVAN, Esq., and Col. SAM. YOUNG. The dwelling is large and convenient, and in good repair; in addition to which there are two tenant houses, and the necessary barns and outbuildings. This property, from its proximity to Ballston and Saratoga Springs, together with its healthy and pleasant location, offers a good opportunity to agriculturists or gentlemen wishing to retire from business.

Apply to C. SCHUYLER, Esq., on the premises, or to W. W. FROTHINGHAM, Esq. No. 513 Broadway, Albany, N. Y.

March 1—1t.

Isabella Grape Vines,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over twelve years has conferred on the Vineyards at Croton Point, are offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the grape with entire success, (provided their locality is not too far north.) All communications, post paid, addressed to R. T. UNDERHILL, M. D., No. 310 Broadway, New-York, will receive prompt attention.

He feels quite confident that he has so far meliorated the character and habits of the grape vines in his vineyards and nurseries by improved cultivation, pruning, &c., that they will generally ripen well, and produce good fruit when planted in most of the Northern and all the Western, Middle and Southern States.

March 1, 1850—2t.

Syracuse Nurseies,

THORP, SMITH & HANCHETT, PROPRIETORS,
Syracuse, N. Y.

WE have now standing in our nurseries, of suitable age and size for transplanting,

More than 100,000 *Fruit Trees,*

Consisting of the various kinds adapted to this climate, from which, persons desiring to establish *Apple, Pear or Peach Orchards* for profit, or those who wish merely to furnish their *Gardens* or *Town Lots* with a few select varieties for their own pleasure and enjoyment, can provide themselves with *all in quantity* which may be wanted, and *every thing in kind* which is most worthy of cultivation.

Our stock embraces, of Fruit Trees,

Apple and Cherry, of extra size;
Peach and Plum, of the best early, medium and late varieties;
Standard Pear, of unusual thriftiness and beauty;
Dwarf Pear, among which are the following choice kinds:

Ananas,	Duchess d'Angouleme,	Madeleine,
Bartlett,	Doyenne White,	Passe Colmar,
Beurre Diel,	do Boussouck,	Summer Franc Real,
do Piquey,	Easter Beurre,	Soldat Laboreur,
do Capiaumont,	Glout Morceau,	Van Mons L. Le Clerc,

Colmar d'Aremberg, Louise Bonne d'Jersey, Vicar of Winkfield.

Of Ornamental Trees,

1,000 *Horse Chestnuts*, 10 to 12 feet high, very stocky, and well formed;
1,000 *Mountain Ash*, American, 8 to 10 ft. high, with fine heads
500 do. do. European, 6 to 8 ft. high, do do
500 *Ailanthus*, large and regularly shaped.

And of Miscellaneous Productions,

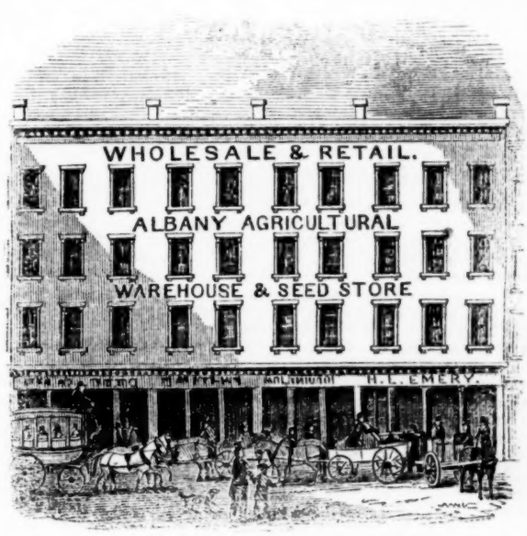
Fir Trees, Silver-leaved Abele, Snowballs, Michigan Roses (double.) Buckthorn, bearing Grape vines, Seedling Horse Chestnuts, 1 and 2 years old, Quince Stocks, Quince Trees, &c., &c., &c. All or any of which will be sold at very reasonable prices,

At Wholesale or Retail.

As no pains have been spared to give our Trees while in the nursery, a vigorous and healthy start, they do not require, on transplanting, that tedious process of wet-nursing which is indispensable to bring up those of a slow, lean, and stunted growth.

☞ *Catalogues* furnished, as usual, to *post-paid* applications.

Syracuse, March 1, 1850—2t.



Constantly on hand at the

Albany Agricultural Warehouse & Seed Store,

Nos. 369 & 371 BROADWAY, ALBANY, N. Y.

PLOWS of all descriptions adapted to the soil and modes of cultivation throughout the United States.

Cultivators with Steel and Iron Teeth, for one and two horses, for all crops.

Corn Planters, for hills and drills, and adapted for all kinds and quantities of seed per acre, with a perfection not otherwise attainable.

Emery's Seed Planters, for Carrots, Turneps, Beets, Broom Corn, &c., for hand or horse power. Several hundreds of the above having been sold and approved during the past 3 years, there is no longer any question as to their utility.

Reaping Machines, Hussey's and McCormick's, will be furnished on demand.

A full and complete assortment of every kind of Implement and machine, as also seeds and grains for Field and Garden, required by the husbandman, constantly on hand, at the lowest manufacturer's prices, and warranted to be in all respects what they are represented

March 1—1 HORACE L EMERY.

Lynchburg (Va.) Land Agent.

THE undersigned has on hand, for sale, FIFTY PLANTATIONS, lying in this section of the State—say from two to one hundred and fifty miles from Lynchburg. Prices from three to twelve dollars per acre. Mountain land, from thirty-five cents to two dollars. All communications. post-paid, promptly attended to.

Lynchburg, Va., Feb. 1—2t* BENJAMIN WILKES.

For Sale,

TWO Short Horn Bull Calves, 1 year old in April next. Both are descended from the bull Yorkshireman—bred by the late Thomas Bates, Esq. In color, one is red, the other red with a little white.

Letters of inquiry, post paid, attended to. J. M. SHERWOOD.

Auburn, Feb. 1—2t.

Highland Nurseries, Newburgh, N. Y.

(*Late A. J. Downing & Co.*)

THE PROPRIETORS beg leave to inform their patrons, and the public in general, that their stock of

Fruit and Ornamental Trees, Shrubs, Roses, &c.,

For Spring planting, is unusually large and thrifty, and embraces all of the best varieties introduced into notice in this country or Europe; of Apple, Pear, Plum, Cherry, Peach, Nectarine, Apricot, Grapevines, Gooseberry, Currants, Raspberry, Strawberry, &c., &c.

Portugal Quince trees, standards, extra size, each....$1 00
do. do. quenouille, do. 1 00
Angers, (true,) extra 1 00
Trees of the usual size..... .... 0 50

Also, *Pears* on Quince, and *Apple* on Paradise stocks, for dwarf trees.

The stock of Ornamental Trees, Shrubs, &c., is very large; and quantities to dealers, or planters on a large scale, will be furnished at greatly reduced rates.

Hedge Plants.

A large stock of Buckthorn, and Osage Orange plants.

Also, a large stock of Rhubarb and Asparagus roots.

The entire stock has been propagated under the personal supervision of A. SAUL, whose long connection with this establishment is some guarantee, from the reputation it has gained, (and the present proprietors are determined to merit,) as to the genuineness and accuracy of the present stock.

Orders respectfully solicited, and will receive prompt attention, which will be carefully packed and shipped to any part of the Union or Europe.

Catalogues furnished gratis to post-paid applicants.

Feb. 1, 1850—3t. A. SAUL & CO.

JUST PUBLISHED,

BY DERBY, MILLER AND CO., AUBURN.

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS,

CONTAINING directions for the Propagation and Culture of Fruit Trees, in the Nursery, Orchard, and Garden, with Descriptions of the principal American and Foreign Varieties cultivated in the United States. With 300 accurate illustrations. One volume of over 400 pages, 12 mo. Price $1.

A cheaper, but equally valuable book with Downing's was wanted by the great mass. Just such a work has Mr. Thomas given us. We consider it an invaluable addition to our agricultural libraries. *Wool Grower.*

We predict for it a very rapid sale; it should be in the hands of every fruit grower, and especially every nurseryman. It is a very cheap book for its price.—*Ohio Cultivator.*

It is a most valuable work to all engaged in the culture oi fruit trees.—*Utica Herald.*

It is a book of great value.—*Genesee Farmer.*

Among all the writers on fruits, we do not know of one who is Mr. Thomas' superior, if his equal, in condensing important matter. He gets right at the pith of the thing—he gives you that which you wish to know at once; stripped of all useless talk and twattle. No man has a keener eye for the best ways of doing things. Hence we always look into his writings with the assurance that we shall find something new, or some improvements on the old; and we are seldom disappointed. This book is no exception. It is *full*. There is no vacant space in it. It is like a fresh egg—all good, and packed to the shell full.—*Prairie Farmer.* Jan. 1, 1850.—3t.

Horse Powers and Threshing Machines.

E. PLANT, No. 30 Cedar Street, New-York, Agent for the Proprietor, for making and selling the "Warren" Improved Two and Four Horse Powers and Threshers. Also. "Trimbles."

Price of the "Warren" Two Horse Power and Thresher, only $80
do do Four do do do $110
Price of the "Trimble" Two Horse Power, (without Thresher,) $60
do "Warren" do do do do $50
do do Four do do do $75

Bands, from $4.50 to $6.

These *latest Improved* Threshers and Powers give universal satisfaction, and are deemed far superior to any others known heretofore for any thing like their cost.

Cash Orders filled promptly.

N. B. *PURCHASING & COMMISSION AGENCY.*

The undersigned also continues the business of the late E. Plant & J. Plant. (E. Plant & Co..) of Purchasing for Orders. on Credit or for Cash, Dry Goods, Groceries, Hardware, &c.. &c., for a commission of 2½ per cent. Produce, such as Sugar, Cotton, Tobacco, Peltries, &c., also received and sold on Commission. E. PLANT,

Dec. 1, 1849—6t. No. 30 Cedar St New-York.

Seeds fo Sping Sowing and Planting.

500 bushels of superior Black Sea Wheat, pure, having been but one year raised in the States.

150 bushels of Clump wheat, a new article of spring wheat, of large berry, and said to be a good yielder, and is much grown in Canada.

150 bushels of Italian Spring Wheat.

100 bushels of Spring Rye.

75 bushels of very superior Broom Corn Seed.

A large supply of choice Clover and Timothy seed, a low prices, at wholesale or retail.

Garden and Field Peas, any quantity.

A fresh lot of Garden Seeds, wholesale or retail.

For sale at the Albany Agricultural Warehouse and Seed Store, No. 369 & 371 Broadway. Feb. 1, 1850. H. L. EMERY.

Louisville (Ky.) Seed and Agricultural Store.

THE subscriber offers for sale,

1000 bushels Kentucky Blue Grass seed
600 " Red Top, "
200 " Orchard Grass, "
200 " Prime Timothy "
500 " " Red Clover "
200 " Hemp "
100 " Millet "
100 " Buckwheat "

Also, Lucerne and White Clover.

30,000 papers Garden Seeds, assorted, and all varieties of Garden Seeds by the pound.

50,000 Fruit Trees, consisting chiefly of Apple, Peach, Pear, Cherry and Quince.

Also. Grape Vines, Asparagus roots, Strawberry plants, &c., &c., from the nurseries of L. Young, H. P. Byram & Co., Jas. Orr, and G. G. Hikes of this vicinity.

He also keeps every variety of Agricultural and Horticultural Implements on hand, and will be happy to fill orders (accompanied with cash or satisfactory reference) from all parts of the United States.

Feb. 1—2t. A. G. MUNN.

Trees! Trees!! Trees!!!

FOR SALE, at Mount Ida Nursery, Troy, N. Y., a choice variety of Fruit Trees, comprising Apples, Pears, Peaches, Plums, and Cherries, of the most approved kinds—the greater part of them worked from bearing trees, and all of them by the subscriber—therefore he can recommend them with confidence. He would also say to those that have not had the experience, that trees brought from the South (if they do live) do not grow as thrifty for a number of years, as those raised in a Northern latitude, which many persons can prove from experience. He also pays particular attention to the transplanting of his trees so as to have them well rooted.

Also, a good variety of Shade Trees, consisting of Scotch Elm, Sycamore, Linden, Horse Chestnut, Mountain Ash, Evergreen Privet for Hedges, China and Hardy Roses, &c., &c.

Catalogues and other information can be had of the Nurseryman,

Feb. 1—6ms. JOSEPH CALDWELL.

Kinderhook Nurseries.

THE proprietor begs leave to inform his patrons and the public in general, that his stock of

Fruit and Ornamental Trees, Shrubs, Roses, &c.,

For spring planting, is large and thrifty, and embraces all of the best varieties introduced in this country, of Apples, Pears, Plums, Cherries, Peaches, Nectarines, Apricots, Grape Vines, Gooseberries, Currants, Strawberries, &c.

Also, Hedge Plants.

A large lot of Buckthorn Plants, Locust, Privet, Box, &c. Asparagus roots, Rhubarb.

Orders respectfully solicited, and will receive prompt attention. Articles will be carefully packed and shipped to any part of the country.

Catalogues furnished gratis to post paid applicants.

Kinderhook, Feb. 1, 1850—2t. H. SNYDER.

Wanted.

A YOUNG man with a small family to take charge of a nursery, who has some knowledge of farming, and is thoroughly acquainted with the propagation of Fruit Trees.

He must be well recommended as a man of integrity, and to be moral and temperate in his habits. None other need apply.

RUFUS WHITTIER.

Chickopee, Mass., Feb. 1, 1850—3t.

Highland Nurseries, Newburgh, N. Y.

Late A. J. Downing & Co.

20,000 Apple Trees of the most approved varieties, for sale, (of *extra size*, from 8 to 12 ft. high, and 3 to 5 years' growth.) at $20 per hundred.

Persons wanting trees to sell again, will be dealt liberally with.

Feb. 1, 1850—3t A. SAUL & CO.

Take Notice.

THREE Months Extra Pay and One Hundred and Sixty Acres of Land will be procured for all who enlisted for five years, or during the war of 1812, and for all, including Volunteers who served in Mexico. and for the heirs of all who have died in the service.

Information will be given to relatives, Free of Charge, by writing to G. F. LEWIS, Detroit, Michigan, (postage paid.)

Those who do not know what became of their friends, write when and where they joined the army

Feb. 1—3t.*

Stocks, Scions, Evergreens, Strawberry Plants, &c.

B. M. WATSON offers for sale at the *Old Colony Nurseries*, PLYMOUTH, Mass., Stocks of Fruit Trees of first rate quality, suitable for spring grafting and budding in the coming summer, at the annexed prices per 1000. Apple, 1 year, strong, $5; 3 years, transplanted, $10—Pear, 1 year, $8; 2 years, $15; 3 years, transplanted $20—Plum, 2 years, $15—Cherry, 2 years, $12; 3 years transplanted, $15—Quince, large and fine, $18; 1 year, strong, $12—Mahaleb, strong, $25—Paradised, strong, $25—St. Jean, (dwarfer) $5 per 100. Ash, Maple, Laburnum, Lime, SpanishChestnut, Poplar, Mountain Ash, Elm, Alder, &c., &c., 4 feet, at $3 to $8 per 100. Arbor Vitæ, Norway Spruce, Scotch Fir, Balsam Fir, Silver Fir, Larch, Red Cedar, 1 to 2 feet, $5 to $10 per 100.

SCIONS. Apple scions, (fine sorts) $1.50 per 100. Paradise cuttings $8 per 1000. Scions of the finest sorts of pear of established reputation (say 30 sorts,) and of other fruits, $2 per 100, $15 per 1000.

STRAWBERRIES. Burr's New Pine, $1 per 100; Boston Pine, $1; Hovey's Seedling, $1; Richardson's Early, Late and Cambridge (fine sorts) $1.50 per doz.; Early Virginia Scarlet, $1 per 100; Jenny's Seedling. $3; Aberdeen Beehive, $5; Swainstone, $3; Myatt's Eliza, $2; Crimson Cone, $2; Black Prince, $5; Deptford Pine, $3; Princess Alice Maude, $3; Keene's Seedling, $2; Willey's Seedling, $3; White wood, $1;—25 cents to $1 per dozen.

Also, Dwarf and Standard Pears, select Shade Trees, Shrubs and Climbers; Weeping Trees for lawns, Roses, Phloxes, Verbenas, Chrysanthemums, and other fine plants for masses, at low prices, of which a priced list will be sent, post paid, on application.

Also, Pear seed of prime quality.

Feb. 1, 1850.—3t.

New Scarlet Verbena---Robinson's Defiance.

J. M. THORBURN & CO., 15 *John street, New-York*,

HAVE now ready for delivery, strong plants of the above splendid Verbena, the finest in England, from whence they obtained it last June, fully testing its quality during the summer. The bloom is of the most vivid scarlet, with fine foliage, and so far from being injured by the heat of the sun, was rather improved, and continued a mass of flowers, rapidly covering the ground, while most others were destroyed by the heat, nor ceased to flower in profusion till checked by frost at the end of October—after which, being taken up and removed into the greenhouse, flowered away till December, and is now (January 21) fully out for a long succession of bloom.—It may be seen in perfection very soon by any one who will take the trouble to visit Astoria.

TESTIMONIALS.—*Gardener's Chronicle*, (Dr. Lindley,) Aug. 28.—"Robinson's Defiance" is a most brilliant flower—fine in form and a good trusser—best of its class.

Gardener's Journal, Sept. 4.—"Robinson's Defiance"—beautiful variety—form good—segments of the corolla broad, firm in substance and flat—color, a brilliant scarlet—habit of the plant good, and a free bloomer.

The Gardener, Sept. 18.—"Robinson's Defiance" is a superior variety, the petals are stout, the flower and truss large and well formed—color, a clear vivid scarlet—the plant is a strong and free grower, with a fine foliage and superior habit—we have not seen its equal.

It received first class certificates and the highest commendation at the following exhibitions—"Royal South London," Sept. 15—"Slough," Sept. 21—"Norwich," Sept. 23—"Metropolitan," Sept. 28—and the "Chelsea Society."

The habit of the plant is equally adapted for potting or bed culture, being short jointed with remarkably fine foliage, and a free bloomer. A large Italian vase filled with it at Astoria last summer, was the most striking object in the garden, and was adored by all gardeners and amateurs who observed it. It was first sent out in England in the Spring of 1848 at 7s 6d sterling per plant, but was not successfully imported here till last season.

A good stock of this beautiful Verbena, (*warranted to answer description*,) being now ready to send out, orders will be promptly executed with strong healthy plants at 50 cents each—$5 per dozen—six at same rate—with a liberal discount to the trade when a dozen or more are ordered.

Also the following additional new Verbenas, from England:

ANACREON—large bright rose, good habit and fine foliage, free bloomer and close set, pretty eye.

BARKERII—scarlet crimson, good spreading habit and profuse bloomer.

ROSY MORN—light rosy crimson, large compact truss, good eye and free bloomer—a beautiful variety.

SATELLITE—orange scarlet, exquisite form and trailing habit, well adapted for large pan pots or vases—foliage soft, serrated, and of a feathery style, extra fine—50 cents each—or if the set of *four* is ordered. $1.50—have been proved a season, and fully answer description.

The following approved older sorts, $1.50 per dozen—Beauty Supreme, Flambeau, Fireball, Major Ringgold, Mestosa, Mary Anne, Othello, Polk, Queen, Roseum Elegans, Smith's Blue Bonnet, and others well adapted for bedding out or in patches.

PETUNIAS—Hebe, Eliza, Beauty of Yorkville, Duke of Bedford and other good sorts—$2 per dozen.

DAHLIAS in dry roots—all the prize sorts exhibited at Castle Garden last October—$5 to $15 per dozen.

☞ Plants of the new Verbenas can readily be sent by mail; by shaking off the soil a half dozen will not weigh over an ounce; by immediate potting on arrival and trifling care, will recruit in three or four days and be in advance and superior condition for turning out in the month of May—of course, much earlier, further south.

Feb. 1, 1850—2t.

The American Fowl Breeder,

A New and Valuable book,

CONTAINING full information on Breeding, Rearing, Diseases and Management of

Domestic Poultry,

And instructions concerning the choice of pure Stock, Crossing, Caponising, &c., &c., *WITH ENGRAVINGS*. By an association of Practical Breeders.

The above valuable work is just published by John P. Jewett & Co., Cornhill, Boston, and it is offered at the extremely low price of *Twenty-five Cents* per copy, to bring it within the means of every man interested in Poultry.

☞ *We want 100 Good Faithful Agents*, ☜

To sell this work in every county in New England, New-York Pennsylvania and the West, in connection with

Cole's American Fruit Book,
AND
Cole's American Veterinarian.

Active and intelligent men can make money at the business.

Address, post paid, the publishers.

JOHN P. JEWETT & CO.,
Cornhill, Boston.

P. S. The American Fowl Breeder is done up with thin covers and can be sent by mail to any part of the country. Any persor sending a quarter of a dollar by mail, *post paid*, shall receive a copy of the book.

Feb. 1—3t.

Seedlings.

PEAR, Plum, Cherry, Quince, Apples, Horsechestnut, Mountain Ash, and Buckthorn Seedlings for sale. Also seed of the above kinds of trees. Every variety of Fruit and Ornamental Trees, and grafts of the celebrated Virgalieu Pear of Geneva. For sale at the Geneva Nursery, by

W. G VERPLANCK.

Geneva, Nov. 1.—6t.*

Agricultural Warehouse and Seed Store.

No. 197 Water street, (near Fulton,) New-York.

THE subscribers would respectfully invite the attention of planters and dealers in Agricultural and Horticultural Implements, Garden and Field Seeds, &c., &c., to their large and varied assortment of Garden and Field tools, &c., which they are selling at the very lowest rates that they can be procured in the United States. Persons living at a distance can obtain an "illustrated" Catalogue, containing a list of prices, on application by letter, post-paid. Those ordering from us may depend upon their orders being promptly filled.

The following are a part of the utensils kept for sale by us, which are considered the best in use, all of them having taken the highest premiums:—Wheeler's Railway Horse Power, Threshing Machines and Separators, Grant's Fanning Mills, of six different sizes, for Rice as well as Grain; Mayher's do.; Hovey's Spiral Hay, Straw and Stalk Cutters; Smith's Smut Machines and Buckwheat Cleaners; Beal's Corn and Cob Crushers, for Feed, horse power; Sinclair's Corn and Cob Crushers, for hand or power; Sinclair's Hay, Straw and Stalk Cutters, hand or horse power; Greene's Hay Cutters, 12, 18 and 24 knifes; Mayher's Hay and Straw Cutters, 8, 10, 12, 15, and 18 knifes; Wheeler's Stalk or Cane Cutter, Power Machine; Mayher & Co.'s Corn Shellers, single and double-hand or power; Burrall's Corn Shellers and Separators; Warren's do., wood and iron; Smith's Corn Sheller and Separator, (power,) 1200 Bushels per day; Virginia do. do., hand or power, 600 to 800 bushels per day; Sinclair's do. do. and Husker, power; Whitman's Horse Power, Threshing Machine and Cleaners; Taplins' Horse Powers; Mayher's do. do.; Emery's Threshing Machines, one and two horse power; Emery's Seed Sowers or Corn Planters; Emery's Saw Mill; Emery's Centrifugal Churns; Thermometer Churns, of different sizes; Cylindrical Churns; Atmospheric Churns; Self-Acting Cheese Presses; Hay Presses; Bachelor's Corn Planter; Seed Sowers of different kinds; Bark Mills; Cider Mills; Paint Mills; Coffee Mills; Corn Mills; Fitzgerald's Flouring Mills; Prentiss and Pages' Flouring Mills, Burr Stone; Mayher & Co.'s Eagle Improved Polished Plows, of different sizes and patterns; Worcester do; Mayher & Co.'s common do.; Freeborn do.; Prouty and Mear's Plows of all kinds Center Draught; Sub Soil Plows of different kinds and sizes; Side-Hill do; Double Mouldboard do.; Cultivators, Steel and Cast-Iron teeth; Geddes' Harrows; Ox Yokes and Bows; Single and Double Wiffletrees; Ox Scrapers, of Wood and Iron, large and small; Ox Carts; Farm Wagons; Mule Carts; Wheelbarrows; Canal Barrows; Field and Garden Rollers, Iron and Wood; Wheat Drills; Reaping Machines; Mowing Machines; Rice Hullers; Store Trucks; Ground Augers; Ox-leg and Trace Chains; Pickaxes; Grub Hoes; Rakes, Scythe Sneaths, Grain Cradles, Crow-Bars, &c., &c. In fact, we have every thing wanted for Farming purposes, got up in the best manner, style, workmanship, and of the very best material, of all the latest improvements. We have also for sale a large quantity of the best Seed and Spring Wheat, Oats, Corn, Barley, Rye, Peas, Beans, Turnip, Cabbage, Beet, Carrot, Parsnip, Onion, Radish, Asparagus, Clover and Grass Seed, raised expressly for us, and warranted fresh—a very superior article. We also have a large quantity of Guano, Bone Dust, Lime, Plaster and other Fertilizers on hand. Ornamental and Fruit Trees, Shrubs, &c., of the best quality, furnished to order. Also, Wire Cloth, of all kinds; Castings do., Steam Engines, Sugar Mills, Saw Mills, Shingle and Brick Machines, together with Force, Cistern, Well, and other Pumps.

JOHN MAYHER & CO.,
Feb. 1, 1850—tf No. 197 Water street, New-York.

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Geo. Glenny's New Farm & Garden Newspaper, "THE COUNTRY GENTLEMAN,"

IS published in London, on Mondays in time for post, with the latest market prices of Corn, Meat, Cattle, Seeds, and Money, and is the very best weekly Review and Family Newspaper in England, as well as the acknowledged highest authority in all matters connected with Horticulture. Price 6s. 6d. per quarter in advance.

Address GEO. GLENNY,
March 1—3t. 420 Strand, London.

Bloodgood Nurseries,

Flushing, L. I. near New-York.

KING & RIPLEY, PROPRIETORS,

OFFER for sale every variety of Fruit and Ornamental Trees, Evergreens, Flowering Shrubs, Grape Vines, Hedge Plants, Raspberries, Strawberries, &c.

We have 20,000 Peach Trees, of one, two and three years growth, and our Fruit Trees generally, are of *large size* and *thrifty*.

Orders sent to us at Flushing, or 214 Pearl St., New-York, (where Catalogues may be obtained gratis,) will receive immediate attention, and the trees packed with much care for transportation.

March 1, 1850—1t.

Hamilton Nursery.

THE proprietor of this establishment confines himself wholly to the propagation of hardy Fruit Trees, all of which have been obtained from the most reliable sources, or cut from bearing trees of well known varieties. About sixty varieties of Plums and a large quantity of the Apples have been proved on his own grounds; and all are cultivated with his own hands assisted by his son, who is soon to assume a personal interest in the business. And all the cutting of buds or grafts, and the labelling of Trees with the oversight of taking up and packing being done by him in person, he feels confident of being able to give as good satisfaction as to correctness, as can be given by any other nursery. The stock of Apples and Plums is large and embraces numerous varieties, so that the fruit grower and amateur Horticulturist can each be supplied.

A liberal discount to nurserymen and dealers in Trees.

See lling Stocks of Apples and Plums for sale.

Agents.—Geo. G. Sheppard, 145 Maiden Lane, New-York; H. L. Stephens, Honesdale, Pa.; and Wm. J. Hamilton, Kingwood, Mc Henry Co., Ill.

Catalogues sent gratis to all post paid applicants.

CHARLES HAMILTON.
Canterbury, Orange Co., N. Y., March 1—1t

To Fruit Growers.

THE subscriber cultivates at his various nurseries, and has for sale at his residence, *Eustis St., Roxbury, Mass.*, all the choice varieties of the

Pear, Apple, Plum, Cherry, Peach, and other Fruit Trees. Raspberries, Gooseberries, Currants, Grape Vines, Strawberries, Asparagus Roots, &c.

Also, several thousand Pear Trees on the quince, 1, 2, 3, 4, and 5 years from the bud.

Particular attention paid to the cultivation of the *PEAR;* persons wishing extra sized trees, *or Trees on Quince Stocks in a bearing state*, will please call at the nurseries, and make their own selection.

Buckthorn for Hedges, One, Two and Three Years Old.

Ornamental Trees, Shrubs, Roses, Herbaceous Plants, Pœonies, &c.

Scions of all the varieties of the Pear, of established reputation, and also of other fruits.

The whole for sale at the market price.

SAMUEL WALKER,
March 1, 1850.—2t. Roxbury, Mass.

Nursery of J. J. Thomas,

Macedon, Wayne Co., N. Y.

THIS nursery now contains many thousand fine trees, of large, handsome and thrifty growth, consisting of Apples, Pears, Cherries, Peaches, Apricots, &c., and the smaller fruits, of the best standard sorts, and most of the finest new varieties; ☞ *in all cases they have been propagated for sale after being thoroughly proved in bearing* ☜

The collection of APPLES, consists of many thousand large trees, mostly 7 to 9 feet high, embraces the finest standard varieties, and nearly all the valuable new sorts.

When purchasers desire, selections of the best for affording a regular succession of fruit throughout the season, will be made by the proprietor.

A carefully assorted collection of hardy ornamental trees, shrubs, and herbaceous perennial plants, will be furnished at very moderate prices.

Trees for canal and railroad conveyance, will be well packed in bundles, enclosed in strong mats, with the roots mudded and encased in wet moss, so as perfectly to preclude all danger of injury.

All communications, post-paid, to be directed Macedon, Wayne Co., N. Y.

☞ The proprietor, wishing to make some alteration in his grounds now occupied with a fine growth of large sized apple trees, will furnish a good selection, chosen mostly by himself, of summer, autumn, and winter fruit, of the finest standard varieties, at $16 *per hundred*, without charge for packing, where the orders, with remittances, are received before the first of 4 mo. (April) next. Also, *Cherry trees*, 9 or 10 feet high, suitable for planting avenues, of the finest kinds only, selected by the proprietor, at $25 per 100.

March 1—1t

Fruit Trees for Sale.

THE subscriber offers fruit trees at very reduced prices. Having a large stock of the following kinds on hand, he will sell Apple trees at $12 per hundred.

Cherry Trees, $25 per hundred,
Frost Gage Plum Trees, $20 to $30 per hundred.

Early Golden Apricot trees, from one to four years old (on peach stock) from $8 to $15 per hundred; (on plum stock,) 30 cents. All the above trees are smooth and healthy.

Isabella Grape Vines, 1 year old, $7 per hundred.
2 do $10 do.
3 and 4 do $12 do.
3 years old, transplanted, $14 do.

The vines have all been annually cut to the ground, and have fine roots for planting.

Also, a few thousand Fir Trees, from 1 to 3 feet high, at 8 cents pr foot.

All other trees sold as low as at any other nursery.

Fishkill Landing, March 1, 1850—1t. CHARLES DUBOIS.

THE CULTIVATOR

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LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

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